



MONMOUTHSHIRE COUNTY COUNCIL.

PUBLIC HEALTH
REPORT
FOR THE YEAR 1921.

D. ROCYN JONES,

C.B.E., M.B., D.P.H.,

County Medical Officer.

THE COUNTY HALL,
NEWPORT, MON.

13th SEPTEMBER, 1922.



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REVIEW
OF THE
General Sanitary Conditions
OF THE
COUNTY OF MONMOUTH
FOR THE YEAR 1921.

SCOPE OF THE REPORT.

In a circular letter, dated the 28th December, 1921, the Ministry of Health issued directions in regard to the modification of the Annual Reports of the Medical Officers of Health. They state that Annual Reports of a full and detailed character (to be known as Survey Reports) will normally be required at intervals of not more than five years. In other years Medical Officers of Health are asked to prepare an Annual Report of a more simple character (to be known as an Ordinary Report) including, as a minimum requirement, certain particulars indicated in the circular.

It is proposed that the Annual Reports for 1919 and 1920, shall be treated as constituting the first of the series of Survey Reports.

The above paragraphs refer to the Reports of the District Medical Officers of Health. Article 7(a) of the County Medical Officers of Health (Duties) Order, 1910, requires that the Annual Report of the County Medical Officer of Health shall contain a digest of all annual and special reports made by the Medical Officers of Health of all County Districts within the County.

It is proposed to revoke this requirement in order to avoid any delay in preparation of Reports by the County Medical Officers of Health arising out of the necessity for a prior consideration by them of the whole of the Reports for districts within the County, and in order to enable the County Medical Officer of Health to devote his report in the main to a consideration of the work for which the County Council is primarily responsible.

The County Annual Report has for the year 1921, been arranged in accordance with this instruction and many of the statistical tables hitherto compiled have been omitted.

GENERAL STATISTICS.

Area (acres) 345,048.

Population (1921) 358,331.

Rateable value, £1,733,983.

Sum represented by a penny rate, £6,662.

Number of inhabited houses (1921), and number of families or separate occupiers (1921).—At the time of writing this report, the volume of the Registrar-General upon the 1921 Census, which contains the information required by the Ministry of Health under these headings has not been published. It has been ascertained that the unrevised figures may be obtained upon the payment of the sum of 15/-. In view of the fact that the County Council supply the various Government Departments with any information they require concerning the County free of cost, it is deemed unreasonable to pay the fee demanded, and the figures are therefore omitted.

VITAL STATISTICS.

BIRTHS:—The total number of births registered in the Administrative County during 1921, was 10,312, made up as follows:—

	Legitimate		Illegitimate		Total		Grand Total
	Male	Female	Male	Female	Male	Female	
Urban Districts ...	4703	4365	154	140	4857	4505	9,362
Rural Districts ...	477	438	13	22	490	460	950
Total	5180	4803	167	162	5347	4965	10,312

In 1920, there were 10,779 births; in 1919, 8,487 births; in 1918, 8,948 births; in 1917, 8,402 births; in 1916, 8,848 births; in 1915, 10,194 births; and in 1914, 9,455 births. The birth rate for 1921 is 28·3 per 1,000 persons living. In 1920, the rate was 29·2; in 1919, 22·9; in 1918, 24·8; in 1917, 23·1; in 1916, 25·7; in 1915, 28·59; in 1914, 30·2.

For the Urban Districts of the County the birth rate was 29·5 per 1,000 for 1921, and for the Rural Districts 20·4, compared with 29·8 and 24·5 respectively for 1920, and 23·4 and 18·8 for 1919.

There is a decrease in the birth rate as compared with that of last year, which was the highest figure attained since the year 1914.

The number of births of illegitimate children was 329, which gives a rate of 31·9 per 1,000 of the total births and ·9 per 1,000 of population. Last year the number was 364, equal to 33·8 per 1,000 births and ·99 per 1,000 population. For the year 1919, the figures were 358, equal to 42·2 per 1,000 births, and ·99 per 1,000 population.

The birth rate for England and Wales is 22·4

DEATHS :—The total number of deaths registered in the Administrative County, as shown in the Registrar-General's table, was 4,107, as compared with 4,379 in 1920, 4,171 in 1919, 4,943 in 1918, 3,822 in 1917, 4,979 in 1916, 5,063 in 1915, 4,356 in 1914, and 4,272 in 1913.

The general death rate, calculated upon the estimated population of 363,958 works out at 11·3 per 1,000 living. In 1920 the rate was 11·9, in 1919, 11·7; in 1918, 15·3; in 1917, 11·7; in 1916, 12·9; in 1915, 15·3; in 1914, 12·8; and in 1913, 13·05. For the Urban Districts the rate for 1921, was 11·5, and for the Rural Districts, 10·1.

The death rate for the year is the lowest on record.

The death rate for England and Wales is 12·1.

CAUSES OF DEATH AT DIFFERENT PERIODS OF LIFE IN THE ADMINISTRATIVE COUNTY.

Causes of Death.	All Ages.	Under 1 year.	1 and under 2 years.	2 and under 5 years.	5 and under 15 years.	15 and under 25 years.	25 and under 45 years.	45 and under 65 years.	65 and up- wards.
All Causes	4107	944	192	154	173	225	519	854	1046
Enteric Fever	4	1	...	...	...	2	...	1	...
Small Pox ... ..	...	...	...	...	...	...	...	...	...
Measles	7	3	4	...	...	...	...	...	...
Scarlet Fever	11	1	2	5	2	...	1	...	...
Whooping Cough	62	29	25	7	1	...	...	...	...
Diphtheria and Croup	42	3	3	18	15	2	1	...	...
Influenza	97	7	1	2	11	9	26	23	18
Encephalitis Lethargica	11	...	1	2	4	2	...	2	...
Meningococcal Meningitis	2	...	...	...	1	...	1	...	...
Tuberculosis of the Respir- atory System	256	2	1	1	3	76	119	53	1
Other Tuberculous Diseases	73	8	11	7	18	10	8	9	2
Cancer, Malignant Disease	265	...	...	2	...	2	31	134	96
Rheumatic Fever	34	...	...	1	10	5	7	11	...
Diabetes	22	...	...	...	1	1	7	9	4
Heart Disease	368	...	...	2	11	19	38	140	158
Bronchitis	280	67	15	5	2	2	5	51	133
Pneumonia (all forms)	359	109	60	33	16	20	35	46	40
Other Respiratory Diseases	81	5	1	14	5	3	12	25	16
Diarrhoea, etc.	274	178	39	18	8	2	3	12	14
Appendicitis and Typhlitis	29	...	...	...	3	8	13	5	...
Cirrhosis of Liver	19	...	...	...	...	...	3	11	5
Cerebral Haemorrhage, etc.	215	...	...	...	1	2	8	72	132
Acute and Chronic Nephritis	86	2	...	3	4	4	21	32	20
Puerperal Sepsis	13	...	...	...	...	3	10	...	...
Parturition, apart from Puerperal Fever	29	...	...	...	...	6	21	2	...
Congenital Debility, etc.	384	376	2	2	2	2	...	...	...
Violence, apart from Suicide	150	4	4	11	22	19	36	36	18
Suicide	33	...	...	...	...	5	15	10	3
Other Defined Diseases	881	146	23	20	33	21	94	163	381
Causes ill-defined or unknown... ..	20	3	...	1	...	...	4	7	5

The reports of the District Medical Officers of Health do not show that there was any unusual or excessive mortality during the year.

INFANTILE MORTALITY :—The total number of deaths under one year of age throughout the Administrative County was 944; 886 in the Urban Districts, and 58 in the Rural Districts.

The rate per 1,000 births was 91·5, which is 3·6 higher than last year's rate.

In the Urban Districts the rate was 94·6 per 1,000 births, and in the Rural Districts 61·1 per 1,000 births. In 1920 the Infantile Mortality rate was 87·9; in 1919, 88·0; in 1918, 97·6; in 1917, 84·3; in 1916, 88·4; in 1915, 128·5; in 1914, 106; in 1913, 115; in 1912, 105; in 1911, 149; in 1910, 112; in 1909, 104; in 1908, 142 per 1,000 births.

The rate for England and Wales is 83·0.

The Infantile Mortality Rate has risen slightly compared with last year's figure, and it is again above the rate for England and Wales, but it is still around the comparatively low mark which has been general since the County Maternity and Child Welfare Scheme came into existence. The average rate for the 25 years, 1891-1915, is 137·4. The average for the six years, 1916-1921, is 89·7.

The number of deaths of illegitimate children under one year of age was 61, or 5·9 per 1,000 of all births, and 185·4 per 1,000 of illegitimate births. Last year the number of deaths was 50, or 4·6 per 1,000 of all births, and 137·4 per 1,000 of illegitimate births.

The measures used within the County for purposes of reduction of Infantile Mortality are fully dealt with in the Report upon Maternity and Child Welfare for the year 1921, which has already been published and presented to the Council.

Number of deaths occurring during certain age periods in children under one year of age :—

	Under 1 week	1—2 weeks	2—3 weeks	3—4 weeks	Total under 1 month	1—3 months	3—6 months	6—9 months	9—12 months	Total under 1 year
Urban Districts	228	47	47	37	359	148	157	122	99	885
Rural Districts	23	5	4	1	33	12	7	2	5	59
	251	52	51	38	392	160	164	124	104	944

N.B.—The figures in the foregoing table were supplied by the District Medical Officers of Health.

CAUSES OF DEATH OF CHILDREN UNDER ONE YEAR OF AGE.

Causes of Death.	No. of Deaths.			Rate per 1000 Births—Admini- strative County.
	Urban Districts.	Rural Districts.	Administrative County.	
Infectious Diseases ...	41	3	44	4.3
Diarrhoeal Diseases ...	170	8	178	17.3
Wasting Diseases ...	345	31	376	36.5
Respiratory Diseases ...	172	9	181	17.6
Tubercular Diseases ...	10	—	10	1.0
Other Causes ...	148	7	155	15.0
Totals ...	886	58	944	91.5

MATERNAL MORTALITY:—The number of women dying in, or in consequence of childbirth during the year was 42, 13 from Puerperal Fever, and 29 from other causes. This is equal to a rate of .4 per hundred births.

NOTIFIABLE DISEASES.

The following is a summary of the weekly notifications received during the year from the Local Medical Officers, arranged under the respective headings for each Urban and Rural District:—

DISTRICTS	Estimated Population, 1921 for estimating Notification rate	Smallpox and Cholera.	Diphtheria.	Typhus Fever.	Erysipelas.	Scarlet Fever.	Phtthisis.	Other Tubercular Diseases.	Ophthalmia Neonatorum.	Cerebro Spinal Fever.	Acute Poliomylclitis.	Enteric Fever.	Puerperal Fever.	Malaria.	Pneumonia.	Encephalitis Lethargica.
URBAN.																
Abercarn ...	20,480	...	14	...	1	74	1701	292	74	35	2	21	16	1	212	11
Abergavenny (Borough) ...	9,050	...	6	...	...	33	33	11	...	...	...	...	1	...	7	...
Abersychan ...	27,620	...	24	...	...	165	21	12	4	1	...	...	1	...	...	...
Abertillery ...	39,660	...	62	...	5	257	9	24	11	2	...	...	...	...	44	2
Bedwas and Machen ...	8,620	...	25	...	3	31	22	22	5	...	...	2	1	1	3	...
Bedwelty ...	31,700	...	72	...	9	371	20	20	2	...	...	2	...	...	1	2
Blaenavon ...	12,680	...	2	...	...	26	5	5	...	...	...	...	...	...	...	...
Caerleon ...	2,307	...	2	...	...	16	...	...	...	...	...	1	...	...	...	...
Chepstow ...	5,190	...	19	...	1	81	1	...	...	...	...	...	1	...	6	...
Ebbw Vale ...	36,150	...	60	...	19	196	41	12	...	2	...	3	6	...	3	2
Llanfrechfa Upper ...	4,778	...	8	...	2	13	5	1	...	...	...	...	...	...	1	...
Llantarnam ...	7,540	...	15	...	...	25	7	2	...	...	...	...	...	...	4	...
Monmouth (Borough) ...	5,170	...	4	...	...	12	1	...	...	...	...	3	...	...	...	...
Mynyddislwyn ...	15,160	...	19	...	2	85	9	6	...	3	...	3	1	...	...	5
Nantyglo and Blaina ...	16,860	...	2	1	9	98	9	5	...	...	...	...	1	...	91	...
Panteg ...	11,200	...	11	...	...	59	4	...	...	...	...	...	...	...	...	...
Pontypool ...	6,990	...	4	...	2	12	...	...	...	...	...	1	...	...	...	...
Rhymney ...	11,940	...	5	...	3	44	3	...	...	...	...	...	1	...	...	...
Risca ...	17,060	...	29	...	1	26	14	1	...	...	...	...	1	...	...	...
Tredegar ...	25,650	...	31	...	11	112	95	18	...	1	2	6	1	...	52	...
Usk ...	1,483	...	...	...	1	1	2	...	...	...	...	...	...	...	...	...
Totals	317,288	...	414	1	74	1701	292	74	35	2	2	21	16	1	212	11
RURAL.																
Abergavenny ...	9,220	...	...	...	1	39	2	...	...	...	...	1	1	...	...	...
Chepstow ...	8,680	...	47	...	...	21	...	...	...	...	...	1	...	...	...	...
Magor ...	5,460	...	3	...	...	9	1	...	...	...	...	2	...	...	2	...
Monmouth ...	6,500	...	7	...	1	11	...	...	1	...	...	1	...	...	...	...
Pontypool ...	5,270	...	...	...	...	4	1	...	...	...	...	...	...	...	...	...
St. Mellons ...	11,510	...	4	...	1	27	16	1	...	1	1	1	...	...	6	1
Totals	46,670	...	61	...	3	111	20	1	1	1	1	6	1	...	8	1
Grand Totals	363,958	...	475	1	77	1812	312	75	36	3	3	27	17	1	220	12

The number of cases removed to Hospitals, and the number of deaths from infectious diseases, were as follows:—

CASES REMOVED TO HOSPITAL																DEATHS											
DISTRICT	Diphtheria	Typhus Fever	Erysipelas	Scarlet Fever	Tuberculosis	Ophthalmia Neonatorum	Cerebro-Spinal Fever	Acute Poliomyelitis	Enteric Fever	Puerperal Fever	Polioccephalitis	Pneumonia	Encephalitis Lethargica	Diphtheria	Typhus Fever	Erysipelas	Scarlet Fever	Tuberculosis	Ophthalmia Neonatorum	Cerebro-Spinal Fever	Acute Poliomyelitis	Enteric Fever	Puerperal Fever	Polioccephalitis	Pneumonia	Encephalitis Lethargica	
Urban—																											
Abercarn ...	...	...	...	21	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	2	...	35	...
Abergavenny ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	...
Abersychan ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	30	...
Abertillery ...	3	...	...	78	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	37	...
Bedwas and Machen	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	12	...
†Bedwellty ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	41	...
Blaenavon ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	...
Caerleon ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
†Chepstow ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7	...
Ebbw Vale ...	54	...	...	5	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	33	...
Llanfrechfa Upper	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	...
Llantarnam	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8	...
Monmouth ...	7	...	...	13	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...
†Mynyddislwyn	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	20	...
Nantyglo and Blaina	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	20	...
Panteg ...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	12	...
Pontypool ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11	...
Rhymney ...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10	...
Risca... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	13	...
Tredegarr ...	...	...	...	...	...	...	...	...	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	26	...
Usk ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Rural—																											
Abergavenny ...	...	...	...	21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...
Chepstow ...	24	...	...	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9	...
Magor ...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6	...
Monmouth ...	...	...	...	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	...
Pontypool ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...
St. Mellons ...	...	...	...	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6	...
Totals ...	90	...	...	160	...	...	...	...	7	...	...	...	...	1	42	...	111	...	...	...	1	1	413	1359	...	10	...

† Returns not received.

Analysis of the Total Cases and Deaths according to the Age Groups.

CASES NOTIFIED.													DEATHS.													
Disease	AGE GROUPS.												Total all ages over 65 and	AGE GROUPS.												Total all ages over 65 and
	Under 1 year	1-2	2-3	3-4	4-5	5-10	10-15	15-20	20-35	35-45	45-65	65 and over		Under 1 year	1-2	2-3	3-4	4-5	5-10	10-15	15-20	20-35	35-45	45-65	65 and over	
Diphtheria	5	13	20	30	41	140	62	20	26	8	365	3	2	2	2	7	13	2	...	1	30	
Typhus Fever	1	...	...	...	...	...	1	2	1	...	...	...	6	1	...	...	...	...	...	...	...	...	...	1
Erysipelas	4	...	1	5	...	...	4	3	6	12	27	4	66	1	...	...	...	...	...	...	...	2	...	3
Scarlet Fever	19	51	68	84	114	590	343	89	67	12	4	...	1441	...	1	3	1	1	1	...	...	1	...	8
Tuberculosis	2	6	1	3	5	24	31	43	99	51	33	...	298	8	7	1	3	2	7	38	58	40	38	210		
Ophthalmia Neonatorum	13	...	...	...	...	...	...	...	...	...	...	...	13	...	...	...	...	...	...	...	...	...	...	...
Cerebro Spinal Fever	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	1	...	1
Acute Poliomyelitis	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
Enteric Fever	...	...	...	...	...	1	2	4	3	3	1	...	14	...	...	...	...	...	...	2	...	1	...	3
Puerperal Fever...	...	...	...	...	...	...	...	3	8	2	...	...	13	...	...	...	...	...	...	2	4	1	...	7
Polioencephalitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pneumonia	46	32	16	21	1	11	10	10	7	5	2	6	167	69	29	10	12	3	4	3	5	25	20	237		
Encephalitis Lethargica	...	...	1	...	...	...	1	2	1	2	1	...	8	...	...	1	...	...	...	...	2	1	...	6
Totals	90	102	107	143	161	767	454	176	219	95	69	10	2393	82	39	17	18	13	22	13	47	90	65	74	506	

N.B.—The figures for Chepstow, Mynyddislwyn, Rhymney, and Tredegar Urban, and Chepstow Rural Districts are not included in the above, as they were not to hand at the time of going to press with this report.

ISOLATION HOSPITALS.

The following are the Isolation Hospitals at present in the County:—

Abergavenny Joint Hospital, Llanfoist (owned jointly by the Abergavenny Town Council and Abergavenny Rural District Council)	2	wards, 12—33	beds
Abertillery Urban Hospital, Coedcaeddu	2	„ 12—14	„
Bedwellty Urban Hospital, Coedmoeth	6	„ 55	„
Chepstow Joint Hospital, St. Arvans (owned jointly by Chepstow Urban and Rural District Councils) ...	5	„ 20	„
Ebbw Vale Urban Hospital, Beaufort	5	„ 10—12	„
Monmouth Borough Hospital, Buckholt	3	„ 10—12	„
Nantyglo and Blaina Urban Hospital, Coalbrookvale	3	„ 5—7	„
Tredegar Urban Hospital, Ash Vale, Nantybweh ...	2	„ 6—8	„

Cases from Abercarn, Caerleon, Llanfrechfa Upper, Llantarnam, Panteg, Risca and Usk Urban Districts, and Magor, Pontypool and St. Mellons Rural Districts are admitted to the Newport Borough Isolation Hospital, Alt-yr-yn, Newport, when accommodation is available, but in the reports of the majority of these districts comment is made upon the difficulty of securing adequate facilities at that Institution.

The facilities in the Administrative County for the isolation of the infectious sick are totally inadequate. Several of the Isolation Hospitals now in use are unsuitable for the purpose.

A Public Enquiry was convened by the County Council on 3rd October, 1921, when the following report of the Commissioners was received by the County Council:

“ We have carefully considered the evidence for and against, tendered by the representatives of those Authorities present, and we are of opinion that the provision of facilities for the isolation of the infectious sick in the County is neither satisfactory nor adequate.

We are convinced that a County scheme, with grouping of various contiguous districts, which owing to the configuration of the land must generally be in Valleys, is most efficient practically and financially and would enable, in cases of localised epidemics, the Hospital of one Valley to be used for the patients of another.

We have not been able, however, to ignore the chaotic financial condition of the County, and the exceedingly high rates of most of the authorities inter-

ested; and in view of these facts we feel that we are unable to recommend at the present time that any Order should be made, and are of opinion that a postponement of a County scheme must take place until the finances of the County are better able to stand what we consider a very necessary provision."

ZYMOTIC DISEASES.

The seven principal Zymotic Diseases are Small-pox, Measles, Scarlet Fever, Diphtheria (including Membranous Croup), Whooping Cough, Fever (including Typhus, Enteric, and Continued Fevers), and Diarrhoea.

These diseases caused 343 deaths, and gave a Zymotic death rate of .94 for the County, as compared with a rate of 1.15 for the year 1920, .61 for 1919, 1.26 for 1918, .96 for 1917, .72 for 1916, 1.05 for 1915, 1.73 for 1914, 1.29 for 1913, 1.86 for 1912, 2.5 for 1911, 1.22 for 1910, .87 for 1909, 1.5 for 1908, for the County. This year's rate is a marked decrease on that of last year.

Table showing death-rate and attack (notification) rate of Zymotic Diseases in the County of Monmouthshire during the year 1921.

Population for death rate and attack (notification) rate, 363,958.

Disease.	No. of Deaths.	Death Rate per 1000 of population.	No. of notifications.	Attack Rate per 1000 of population.	England & Wales death rate per 1,000 of population.
Small Pox ... ..	...	...	...	...	...
Measles (including German Measles)	7	.02	Not notifiable	..	.06
Scarlet Fever	11	.03	1812	4.98	.03
Diphtheria (including membranous Croup)	42	.12	475	1.31	.12
Whooping Cough	62	.17	Not notifiable	...	.12
Fever (including Typhus, Enteric and Continued Fevers)	4	.01	28	.08	.02
Diarrhoea (under two years of age)	217	.6	Not notifiable	...	...
Totals	343	.94	*2315	*6.36	...

* Notifiable Diseases only.

COMPARISON OF INFECTIOUS DISEASES DEATH RATES IN MONMOUTHSHIRE.

	Measles and German Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria.	Typhoid.
Average for years 1907- 1913 inclusive ...	·43	·07	·92	·13	·09
1914	·47	·13	·12	·17	·03
1915	·71	·09	·33	·19	·03
1916	·04	·06	·21	·12	·04
1917	·30	·02	·11	·06	·079
1918	·53	·03	·30	·08	·02
1919	·003	·06	·28	·07	·03
1920	·51	·06	·16	·18	·01
1921	·02	·03	·17	·12	·01

MEASLES.

This disease was not prevalent during the year. There was a severe epidemic in the previous year.

SCARLET FEVER.

In only two districts did this disease assume epidemic proportions, viz., Blaenavon Urban (in the autumn months) and Abergavenny Rural. In most of the other areas it was sporadic, while the Medical Officer of the Ebbw Vale Urban District reports a seasonal prevalence, reaching its maximum in October, and having its minimum in March, a feature being that females were more subject than males. In the Abertillery Urban District the disease was more prevalent than usual, and the Abercarn Urban District suffered prevalence early in the year. No severe cases are reported, the mild type being general.

DIPHTHERIA.

This disease was more prevalent than usual in the Abertillery, Llanfrechfa Upper, and Llantarnam Urban, and Chepstow Rural Districts, while it reached epidemic form at Raglan, in the Monmouth Rural District. Although there was a reduction in the cases notified and deaths in the Tredegar Urban District, the Medical Officer states that the disease is still much too prevalent. The number of cases in the Llanfrechfa Upper and Llantarnam Urban Districts, though not excessive, is the more marked on account of cases having been seldom met with during the past 30 years. The Medical Officer attributes them to contact with persons outside the areas.

ENTERIC FEVER.

The Medical Officer of Health for Monmouth Borough reports that owing to the long period of drought, and the consequent water shortage, the Wyesham source was largely utilised. An analysis of this water showed a certain degree of pollution. Three cases of Enteric Fever occurred, one ending fatally.

DIARRHOEA AND ENTERITIS.

A considerable number of cases of mild Diarrhoea occurred in Monmouth Borough, probably due to the water supply as noted under Enteric Fever. Hand-bills were distributed throughout the Abertillery Urban District giving preventive methods, and emphasizing the "Fly" nuisance as being a potent cause of these diseases.

CEREBRO-SPINAL FEVER AND ACUTE POLIOMYELITIS.

Nothing of note to report.

SMALL-POX AND VACCINATION.

No cases notified during the year.

The Public Health (Small-pox Prevention) Regulations, 1917, give power to Medical Officers of Health of Sanitary districts on the occurrence of any case of Small-pox, to perform vaccination or re-vaccination of persons who have come in contact with the infection.

WHOOPING COUGH.

In only one district was this disease epidemic, viz., Llantarnam Urban, from January to May. The Medical Officer of Health for Abertillery Urban District states that whooping cough was not nearly so virulent as in former years.

ENCEPHALITIS LETHARGICA AND ACUTE POLIO-ENCEPHALITIS.

Nothing of note to report.

PUBLIC HEALTH (PNEUMONIA, MALARIA, DYSENTERY, Etc.), REGULATIONS, 1919.

Many deaths from Pneumonia following Whooping Cough were reported from the Nantyglo and Blaina Urban District. Notifications under these Regulations, particularly of cases of Pneumonia, are far from satisfactory and the Medical Officers of Health were asked in a circular letter to draw the attention of the general practitioners to the requirements of the Ministry of Health as to notification.

INFLUENZA.

There was no epidemic of Influenza in the County during the year, though it was prevalent in some parts. Cases in December were the forerunners of the big outbreak in the early part of 1922. In Abertillery Urban District severe cases at regular intervals were reported.

ERYSIPELAS.

The Medical Officer of Health for Ebbw Vale states that most cases of this disease in his district were associated with accidents.

OPHTHALMIA NEONATORUM.

Thirty-six cases of this disease were notified under the Public Health (Ophthalmia Neonatorum) Regulations, 1914. The disease is fully commented upon in the County Maternity and Child Welfare Report for the year 1921.

Cases			Vision Unim- paired	Vision Impaired	Total Blindness	Deaths while under treatment from causes other than Optn. Neonatorum
Notified	Treated					
	At Home	In Hospital				
36	31	5	34	1	1	2

PUERPERAL FEVER.

During the year, 1921, notifications were received from the District Medical Officers of 17 cases, 12 of which terminated fatally. In the year 1920, 24 cases were notified, with 20 deaths; in 1919, 19 cases notified with 11 deaths; in 1918, 6 cases notified with 3 deaths; in 1917, four cases notified with no death; while in 1916, 13 cases were notified, eight being fatal. The attack rate per 1,000 births in 1921, was 1·6. The attack rate per 1,000 of population equalled ·05, the case death rate, 76·4 per cent., and the death rate per 1,000 of population ·03.

Full details of the cases have been included in the County Maternity and Child Welfare Report for 1921, which has already been published.

TUBERCULOSIS.

During the year 312 cases of Pulmonary Tuberculosis were notified, and 256 deaths were registered. Of other forms of Tuberculosis 75 cases were notified, and 73 deaths registered.

TUBERCULAR DISEASES.—Notification Rate per 1,000 of population:—

	1914	1915	1916	1917	1918	1919	1920	1921
Pulmonary Tuberculosis	2·45	2·3	2·47	2·26	1·9	1·27	·78	·86
Other forms of Tuberculosis	·65	·68	·65	·51	·48	·37	·27	·21

TUBERCULAR DISEASES.—Death Rate per 1,000 of population:—

	1914	1915	1916	1917	1918	1919	1920	1921
Pulmonary Tuberculosis	·6	·80	·94	·82	·96	·77	·68	·7
Other forms of Tuberculosis	·23	·28	·26	·27	·27	·21	·19	·2

Tuberculosis is a disease which frequently extends over a period of years, so that in 1913 and the years immediately following, notifications were received of chronic and long standing cases, as well as the new cases coming to the knowledge of the practitioners in the County. It can now be surmised that generally the old cases have been detected and notified, and that the great majority of the cases notified in recent years are new cases only.

Summary of notifications by District Medical Officers of Health to the County Medical Officer, under the Public Health (Tuberculosis) Regulations, 1912, during the period from 2nd January, 1921, to the 31st December, 1921.

Age Periods.	Number of Notifications on Form A.											No. of Notifications on Form B.				No. of Notifications on Form C.									
	Primary Notifications											Total notifications including cases previously notified by other doctors).		Prim. Notifications				Total notifications including cases previously notified by other doctors).		Poor Law Institutions	Sanatoria.	Hospitals.			
												TOTAL.						TOTAL.							
	0 to 1.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 35.	35 to 45.	45 to 55.	55 to 65.	65 & upwards	TOTAL.		Under 5.	5 to 10.	10 to 15.	TOTAL.								
Pulmonary—																									
Males	1	3	10	13	19	37	33	29	23	6	3	177	180	...	...	...	...	...	...	...	35	120	...	31	63
Females	...	4	9	16	24	36	37	22	13	1	...	156	162	...	...	...	...	...	...	...	...	...	...	...	...
Non-pulmonary																									
Males	1	3	15	3	12	7	4	2	1	...	...	48	48	...	...	...	...	...	...	...	1	52	...	...	29
Females	1	7	4	13	7	4	3	3	...	...	...	42	42	...	...	...	...	...	...	...	...	...	...	...	...
Totals	3	17	38	45	62	78	77	56	37	7	3	423	432	...	...	...	...	...	...	...	67	264	...	...	...

N.B.—All definite and doubtful school cases are reported to the Tuberculosis Physician for diagnosis, and definite cases are subsequently notified by him on Form A. Under these circumstances the notification on Form B. by School Medical Officers has been discontinued.

The notification of Tuberculosis in the County is far from satisfactory, and some Medical Officers and practitioners are very lax in the observation of the Public Health (Tuberculosis) Regulations, as to the notification of cases of this disease. As a consequence considerable difficulty is experienced, and much delay is occasioned, in the compilation of statistics of the year's work, and the ratio of non-notified tuberculosis deaths to total tuberculosis deaths is high.

The District Medical Officers and General Practitioners have been circularised on this matter, and some improvement has been effected recently.

The reports of the Tuberculosis Physicians to the Memorial Association for the year ended March 31st, 1922, are as follows:—

Dr. A. CARVETH JOHNSON (East Monmouthshire).

“ The large number of cases under observation at the end of the year calls for comment. This includes a certain number who attend once only, and as it is unwise to say that a patient is free from tuberculosis on one examination they are left in this column. The majority, however, are patients (often contacts) who attend regularly to be weighed and examined. Many have given positive re-actions to tuberculin, and may require further treatment later if any signs of active disease should develop. This work takes up a lot of time and is not adequately represented in the annual tables.

Unfortunately, most of the cases that are found to have active tuberculosis are advanced cases. The very insidious nature of the onset of the disease seems responsible for this, but it is very disappointing to find that there is practically no improvement in the type of case seen after the tuberculosis work has been going on for nearly ten years.

Some indication of the type of case is given by classifying the cases seen according to the international system:—

CLASS 1.—Representing disease of slight severity, limited to small areas on one lobe.

CLASS 2.—Representing disease of slight severity, more extensive than Class 1.

CLASS 3.—Representing advanced disease.

Of the total cases found to be tuberculous 17 per cent. were in the International Class 1; 24·5 were in the International Class 2; 58·5 per cent. were in the International Class 3; or according to Inman's classification, where Class A. are cases with fever even at rest. Class B. are cases with fever when ambulant and afebrile when at rest. Class C. are cases afebrile when ambulant. Class A. are 57 per cent. Class B. are 15 per cent. Class C. are 28 per cent.

The death returns show that 127 died of tuberculosis in Newport during the year, of these 87 had been referred to the Tuberculosis Officer, and 40, or over 30 per cent. were not referred. In East Monmouthshire there were 120 deaths, and only 67 had been referred to the Tuberculosis Officer; that is, over 44 per cent. of those dying of tuberculosis had not been offered the opportunity of receiving treatment from the Association.

The examination of contacts has proceeded rather slowly, but special attendances have been made at the Institute whenever possible. Most of the contacts to T.B. plus cases who have been seen in the last four years have now been examined, but much remains to be done in this direction. I regret that it has not been possible to arrange for a full time assistant. At present the medical staff consists of one full time medical officer, and the services of an assistant for approximately one-third of the time. This is entirely inadequate for the full development of work which includes the care of 78 hospital beds as well as a large area, and it will not be possible to make further progress until more help is provided.

BEECHWOOD HOSPITAL.

The following are the numbers admitted and discharged during the year, April 1st, 1921, to March 31st, 1922:—

Admitted	...	234				
Discharged	...	231				
Transferred to Sanatorium	...	...	...	...	...	30
Improved	...	...	...	...	...	70
No improvement	...	...	...	...	...	25
Took own discharge and discharged at own request	...	...	...	...	...	15
Died	...	...	...	...	...	30
Transferred to other Institutions	...	...	...	...	...	1
No evidence active tuberculosis	...	...	...	...	...	51
Discharged for breaking Rules	9
						<hr/> 231 <hr/>

Total number of cases admitted up to March 31st, 1922	...	1,534
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The only figure calling for any comment is the large number discharged as having no evidence of active tuberculosis. One ward of seven beds has been set apart for observation cases, and they have practically all been tested with tuberculin. It is hoped to publish the results later, but it may be said that a small number has been found to be suffering from active tuberculosis, another small number shows no evidence of tuberculosis, and the majority have

undoubtedly been infected, but shewed no evidence of active disease when in hospital. All this class may of course develop active tuberculosis later, and need to be examined regularly by the Tuberculosis Officer of the area in which they live.

It will be noticed that nine patients were discharged for breaking the rules, and of these seven were men who went out "to get a drink." The tuberculous patient requires much strength of will if he is to keep to the rules of treatment, and make a serious attempt to get well. Many of the patients have not got this, and are therefore not likely to improve. Possibly the methods of M. Coué might help in this matter.

Much assistance has been given by Dr. Parry, the D.C.M.S., also by the Investigation Officer and other officials of the Local War Pensions Committees.

In many cases assistance has been obtained from various sources for the necessitous families of patients who have no pension or who are appealing for one.

The kindness of the Newport people continues. Many concerts, etc. have been arranged, and these undoubtedly cheer up the patients.

CARDIGAN HOUSE HOSPITAL.

The following are the numbers admitted and discharged during the year, April 1st, 1921, to March 31st, 1922:—

Admitted 76. Discharged 75. Remain 26.

Of these, 57 were improved. Three not improved. Five removed by parents against advice. Four died. Six no evidence of tuberculosis.

The chief sites of disease in the 101 cases that were discharged during, and remained at the end of, the year were:—

Hip	...	...	...	...	...	...	30
Spine	...	...	...	...	...	...	15
Knee	...	...	...	...	...	...	12
Glands of neck and axilla				...	...	...	23
Peritonitis		...	...	...	...	...	5
Lupus	...	...	...	...	...	...	4
Hand	...	...	...	...	...	...	5
Elbow	...	...	...	...	...	...	3

Only nineteen operations have been performed in the operating theatre by the Consulting Surgeon, Major Morrell Thomas.

The hospital was not intended for the treatment of chronic spine and hip cases, but unfortunately, these number almost half the cases sent in. They have nearly all done very well, although treatment has probably been more prolonged than if they had been right in the country in the open-air type of Hospital.

The hospital has fulfilled a very useful purpose, and it is extremely unfortunate that it has to be closed by June 30th, 1922.

Dr. J. L. THOMAS (West Monmouthshire).

" The history of the past year is very much that of other years; so a short account of seven years work in this area will include all that one has to say of any particular year. It is not quite fair to judge the work of the Association from the experiences of this particular period, for the Great War with its general upset of the community produced conditions which we trust will never again be forthcoming. These and their effects will be referred to again.

The number of new cases examined in the period from August 1st, 1914, to August 1st, 1921, was 7,320; and the proportion of these definitely diagnosed as suffering from Tuberculosis, has usually been about one-third of the total in any one year. During the last three years this proportion has declined to between 27 and 28 per cent. of the totals, and the totals have dropped considerably during the last two years. But as the second quarter of this year promises to be one of the heaviest, it is evident that it is too soon to draw final conclusions from the above figures.

The last winter of the war seemed to furnish more cases, especially amongst women and children, but the absence on active service of so many of the male population may have been an important factor, and it is unsafe to draw any definite conclusions from observations made at that time.

With the prospect of a closer working relationship with the County Health Authority, a review of the past work will provide material for comparison with results in new circumstances.

The number of new cases indicates that the area has been a fairly busy one, but since the closing of Highfield Hospital, about three years ago, the work has been only that of institute and dispensary. From an occupational point of view there has been little variety, since coal mining, together with some steel, iron and tin working, are the main industries. So the incidence of tuberculosis may be fairly said to vary with the general health of the community, and this fact ought to simplify the problem of prevention.

Experience in this area suggests that, while the provision of Sanatorium beds is adequate, there is still need for a larger number of hospital beds for advanced cases. The need for more accommodation for cases of Surgical Tuberculosis is also acutely felt. The steps now being taken to meet these wants will

tend also to improve the relations between the Tuberculosis Physician and his patients, since a long " waiting list " tends to cause disappointment and misunderstanding.

When the urgently needed additional Medical Staff is forthcoming for our work in the County, and when the Nurses and Health Visitors have settled down to the scheme of operations resulting in closer co-operation of the Association with the County Health Authority, a much larger number of such beds will be required. The monthly returns of the Registrar of Deaths still show that a very considerable proportion of cases of tuberculosis do not come under our notice.

There is sufficient legislation at present available to bring about great changes if reasonably and honestly carried out, but with our belief in infection as the principal cause of tuberculosis, more stringent measures are needed to combat the disease by preventing its spread by this means.

It will be readily granted that there is not sufficient housing accommodation for the quickly growing population of West Monmouthshire, but much good would result from a proper use of that at present available. A much too large proportion of comparatively new dwelling houses is becoming slum-property, and this because of the careless manner of life of the occupants.

Full use of the rooms available is too often not made, one useful living room being very frequently idle, and only used when needed for midwifery or accident emergencies.

Too often the family and lodgers live a very crowded life around the kitchen fire. This habit soon tells on the life of the lodger population, so very numerous in these colliery districts, and including in its numbers many young people who have migrated from the agricultural districts. These, and also many of the young folk of the family drift for change from such a drab life to the crowded bar of the public house, or the ill-ventilated billiard saloon, not to mention the usually very insanitary picture houses.

The varying economical state of the population during the war, and a sudden change from an abnormally high rate of wages to a low one during the last two years have had a very unsettling effect on the people, and when one sees at the present time the ragged and almost naked condition of many young children in some of the colliery villages, it is not pleasant to think of the effects which such poverty must have upon the public health.

The undoubted increase of drinking habits among women, and the very general increase of gambling in the community, are not likely to be conducive to a sound condition of mind or body in the coming generation, and these factors will undoubtedly add to the already great difficulties of the fight against tuberculosis, for they make for the over-crowding in restricted tenements, which

has been prominently quoted as an important factor in the causation of ill-health.

What is the remedy for this state of affairs, and how are reforms to be carried out?

In these days of democratic local government, punitive measures are likely to be futile, but following the example of the Infant Welfare work, much may be expected from the system of rewards in competitions.

If we cannot compel cleanliness in the household, we may, by offering prizes for best kept cottages and their surroundings, and cleanliness and general tidiness of school children, indirectly attain our object of encouraging the general well-being.

As a nation we Welsh folk have a weakness for competition, and there was never a cause in which this spirit could be more usefully fostered.

From general considerations of the prevention of ill-health we turn to specific treatment of a particular disease. In the case of tuberculosis with its long history and ancient and multifarious literature, we encounter greater difficulties than in facing a later encountered disease such as sleeping sickness, or even the terror of the Victorian period, Diphtheria, which, like Small-pox took its toll from the lives of the doctors in charge.

Anti-toxin and vaccination have simplified the problem of these diseases, but in a short period of time attempts at the specific treatment of tuberculosis have had a very checkered career. Following the failure of Koch's early attempts at treatment by tuberculin, a gradually increasing faith in the efficiency of carefully considered doses of his remedy was growing, and the early history of the work in the Memorial Association was marked by its enthusiastic administrations in many of the institutes and hospitals, and not the least by those who had previously used the remedy in private practice. But a sudden change followed the publication of Dr. Bardswell's book in 1914. It is true that curtailment of our staff had some effect in this direction, but *post hoc* or *propter hoc*, our use of tuberculin dropped off suddenly, and this policy has, so far, been generally maintained. Working in an area like West Monmouth with many visiting stations, and these necessarily attended at distant intervals, the administration of tuberculin could not reasonably be expected to give ideal results, but it is very interesting and encouraging to note that the case sheets of many patients treated by tuberculin by my predecessor, Dr. McIntyre (who was evidently as brave in war as he was conscientious in his work for the Association, since he obtained the D.S.O. and M.C. with a bar to each), furnish examples of patients, with definite signs and symptoms of tuberculosis, who had had a course of tuberculin treatment and who are still found to be doing well, when they, with gratitude, come up for examination. In a number of instances such patients joined

up and luckily came safely through the war. If the diagnosis is doubted by captious critics, one may cite some of these in whom recent attacks of influenza have broken down their resistance, and caused the sputum to be labelled T.B. plus.

Fortunately the Surgeons and Specialists of our local Hospitals still have faith in this remedy, and it is encouraging to find that in most cases their faith has not been misplaced, when we have administered it at their request.

The Medical Staff of the Association is well equipped for an extended trial of this remedy, and it is to be hoped that an effort in this direction may be made in the future.

Putting aside specific treatment there remains the consideration of acquired immunity against acute infection and the segregation of advanced and infective cases as preventive of massive infection. The period of time under consideration has furnished many instances of children under observation who were positive to the Von Pirquet Test and usually with hereditary liability, whose immunity stood them in good stead until Influenza, aided often by Broncho-Pneumonia, broke it down, and their "moratorium" ended in "revolution."

Such an unfortunate happening has also befallen many of our Sanatorium cases who went through their full course of treatment with Sputum T.B. minus, but in whom an attack of Influenza or other acute illness converted a closed, into an open, Tuberculous Lesion.

Regained immunity is often the possession of members of infective households, some known to us and many not, and our evident task is to support them in it and help it to last out.

But unfortunately, in this area we meet also the healthy young unit who comes in touch with these infective surroundings, and who quickly falls a victim and succumbs to acute and massive infection, and whose sad case serves only to discount all our endeavours.

Let us hope that the more thorough visitation of homes by Health Visitors in this County will aid our efforts in getting into touch with contacts to acute infection. And in order to help the Health Visitors and Nurses in their efforts, we have at the request of the County Medical Officer recently given them a course of lectures on tuberculosis, but all our efforts will be futile indeed unless we can induce the general public and their leaders and administrators to believe that the common good and not personal inclination should be their guiding light.

The following tables give details of the work undertaken by the Welsh National Memorial Association in the Administrative County during the year ended 31st December, 1921 :—

Table I.—DIAGNOSIS.

Table shewing the number of Persons Examined for Diagnostic Purposes.

	Under observation pending diagnosis on the 1st of Jan., 1921	Number of new cases, including contacts, examined during the Year ended 31st Dec., 1921	TOTAL.	Number found to be suffering from Tuberculosis.		Number with no evidence of active Tuberculosis.	Number still under observation pending diagnosis last day of Year ended 31st Dec., 1921.
				Pulmonary.	Other than Pulmonary.		
Boys ...	183	296	479	16	31	335	97
Men ...	103	410	513	129	33	278	73
Girls ...	152	306	458	18	37	309	94
Women ...	129	352	481	134	19	250	78
Total ...	567	1364	1931	297	120	1172	342

Table II.—RECOMMENDATIONS.

Table shewing the numbers and form of treatment recommended by the Tuberculosis Physicians.

	Number found to be suffering from pulmonary tuberculosis during the Year ended 31st Dec., 1921	Form of Recommendation (Pulmonary Cases).					Total Number of recommendations for Pulmonary Cases.	Number found to be suffering from tuberculosis other than pulmonary during the Year ended 31st Dec., 1921.	Form of Recommendation (Non-Pulmonary Cases).				Total number of recommendations for Non-Pulmonary cases.
		Domiciliary	Institute	Hospital	Sanatorium	For Opinion			Domiciliary	Institute	Hospital	Sanatorium		For Opinion
Boys	16	...	13	3	4	...	20	31	...	12	34	...	46
Men	129	6	67	113	20	...	206	33	...	15	24	...	39
Girls	18	...	9	13	2	...	24	37	...	21	27	...	48
Women	134	2	72	81	16	...	171	19	...	12	11	...	23
Total	297	8	161	210	42	...	421	120	...	60	96	...	156

Table III.—CONTACTS.

Table shewing the number of Contacts examined, with the result of Examination.

(These are included in the numbers in Table I.)

	Number under observation pending diagnosis on the 1st Jan., 1921.	Number examined during the Year ended 31st Dec., 1921.	TOTAL.	Number found to be suffering from Tuberculosis.		Number with no evidence of active Tuberculosis.	Number still under observation pending diagnosis on last day of Year ended 31st Dec., 1921.
				Pulmonary.	Other than Pulmonary.		
Boys ...	35	23	58	5	...	46	7
Men ...	8	21	29	8	3	15	3
Girls ...	35	31	66	...	3	44	19
Women ...	16	15	31	6	...	21	4
Total ...	94	90	184	19	6	126	33

Table IV.—ELEMENTARY SCHOOL CHILDREN.

Table shewing the number of Children attending Public Elementary Schools, who were referred by the School Medical Officers for examination by the Tuberculosis Physicians, with the result of the Examination.

	Number under observation pending diagnosis 1st Jan., 1921	Number of children referred for examination during the Year ended 31st Dec., 1921	TOTAL	Number found to be suffering from Tuberculosis.		Number with no evidence of active Tuberculosis.	Number still under observation pending diagnosis last day of Year ended 31st Dec., 1921
				Pulmonary.	Other than Pulmonary.		
Boys ...	25	50	75	1	4	56	14
Girls ...	8	60	68	2	6	49	11
TOTAL	33	110	143	3	10	105	25

Table IVa. Analysis of the cases shewn above as suffering from Tuberculosis.

	Total Number	Age Groups {	Under 5	5 to 6	6 to 7	7 to 8	8 to 9	9 to 10	10 to 11	11 to 12	12 to 13	Over 13
			
Pulmonary ...	2 2	...	...	...	...	1	...	...	...	..	1	...
Boys	...	...	...	...	...	...	...	...	...	...	...	...
Girls	...	...	...	...	...	...	...	...	...	...	1	...
Non-Pulmonary ...	3 6	...	...	1	2	...	...	...	...	...	...	...
Boys	...	...	...	...	...	...	...	...	...	...	...	...
Girls	...	...	...	...	...	...	...	...	...	...	...	...
TOTAL	13	...	...	1	2	2	...	...	2	2	2	2

Table V.—SANATORIUM TREATMENT.

Table shewing results of Sanatorium Treatment

	Number under Treatment, 1st Jan., 1921		Number admitted during the Year ended 31 Dec., 1921		TOTAL.		Number discharged fit for work			Number Improved	
	Pulmonary	Non-Pulmonary	Pulmonary	Non-Pulmonary	Pulmonary	Non-Pulmonary	Pulmonary		Non-Pulmonary	Pulmonary	Non-Pulmonary
							Tubercle bacilli absent from sputum	Tubercle bacilli present in sputum			
Boys...	2	...	5	...	7	...	1	1	...	2	...
Men ...	13	...	30	...	43	...	12	...	...	11	...
Girls ...	...	...	5	...	5	...	1	...	...	...	...
Women ...	7	...	24	...	31	...	7	1	...	12	...
Total ...	22	...	64	...	86	...	21	2	...	25	...

Table VI.—HOSPITAL TREATMENT.

Table shewing results of Hospital Treatment

	Number under Treatment 1st day of Jan., 1921		Number admitted during the Year ended 31 Dec., 1921		TOTAL		Number discharged fit for work			No. sent to Sanatorium		Number Improved	
	Pulmonary	Non-Pulmonary	Pulmonary	Non-Pulmonary	Pulmonary	Non-Pulmonary	Pulmonary		Non-Pulmonary	Pulmonary	Non-Pulmonary	Pulmonary	Non-Pulmonary
							Tubercle bacilli absent from sputum	Tubercle bacilli present in sputum					
Boys ...	1	12	5	36	6	48	...	...	...	...	...	5	26
Men ...	18	5	112	24	130	29	...	...	...	...	...	52	7
Girls ...	3	10	10	20	13	30	...	...	...	...	...	5	15
Women ...	10	8	66	12	76	20	...	...	...	...	...	33	11
Total ...	32	35	193	92	225	127	...	...	...	15	2	95	59

Patients Treated (Sanatorium and Hospital) at:

Beechwood Hospital ...	84	Talgarth Sanatorium ...	47
Cardigan House Hospital ...	44	West Wales " ...	6
Glan Ely Hospital ...	195	North Wales Surgical Block ...	1
Pontsam Hospital ...	2		
Mardy Hospital ...	5		
North Wales Sanatorium ...	35		
		TOTAL ...	419

for Pulmonary and Non-Pulmonary Cases.

Number Stationary	Number Worse		Number left off treatment against advice		Number discharged for disobedience		Number of Deaths.				Number still under treatment last day of Year ended 31st Dec., 1921.	
	Pulmonary	Non-Pulmonary	Pulmonary	Non-Pulmonary	Pulmonary	Non-Pulmonary	Certified as primarily due to tuberculosis		Certified as primarily due to causes other than tuberculosis		Pulmonary	Non-Pulmonary
							Pulmonary	Non-Pulmonary	Pulmonary	Non-Pulmonary		
1	1	...
2	3	...	3	...	...	...	...	...	12	...
3	1	...	...	...	...	...	4	...
6	...	3	...	4	...	1	1	...	...	...	6	...
											23	...

for Pulmonary and Non-Pulmonary Cases.

Number Stationary	Number Worse		Number left off treatment against advice		Number discharged for disobedience		Number of Deaths				Number still under treatment last day of Year ended 31st Dec., 1921	
	Pulmonary	Non-Pulmonary	Pulmonary	Non-Pulmonary	Pulmonary	Non-Pulmonary	Certified as primarily due to tuberculosis		Certified as primarily due to causes other than tuberculosis		Pulmonary	Non-Pulmonary
							Pulmonary	Non-Pulmonary	Pulmonary	Non-Pulmonary		
...	4	...	...	1	4	...	...	...	...	...	...	13
10	6	2	...	12	3	2	1	10	1	2	...	8
1	3	...	1	1	2	...	...	...	...	...	22	7
11	1	...	...	16	2	...	...	...	...	...	3	6
22	14	2	1	30	11	2	1	16	1	3	...	34

Places of Residence of these Patients:—

URBAN DISTRICTS—

Abercarn ...	22	Caerleon ...	2	Nantyglo & Blaina ...	20
Abergavenny ...	18	Chepstow ...	10	Panteg ...	12
Abersychan ...	16	Ebbw Vale ...	52	Pontypool ...	11
Abertillery ...	23	Llanfrechfa Upper ...	14	Rhymney ...	13
Bedwas & Machen ...	11	Llantarnam ...	21	Risca ...	17
Bedwellty ...	45	Monmouth ...	11	Tredeggar ...	33
Blaenavon ...	5	Mynyddislwyn ...	18	Usk ...	4

RURAL DISTRICTS—

Abergavenny ...	5
Chepstow ...	5
Magor ...	2
Monmouth ...	6
Pontypool ...	9
St. Mellons ...	14

TOTAL 419

monary and Non-Pulmonary Cases.

Number Stationary		Number Worse		Number left off treatment against advice .		Number discharged for disobedience		Number of Deaths.				Number still under treatment last day of Year ended Dec. 31st, 1921	
								Certified as primarily due to tuberculosis		Certified as primarily due to causes other than tuberculosis			
	Non- Pulmonary	Pulmonary	Non- Pulmonary	Pulmonary	Non- Pulmonary	Pulmonary	Non- Pulmonary	Pulmonary	Non- Pulmonary	Pulmonary	Non- Pulmonary	Pulmonary	Non- Pulmonary
4	4	..	..	4	..	..	..	..	1	..	1	38	70
..	..	1	1	4	..	..	..	41	3	3	..	215	40
2	2	..	..	..	..	..	..	3	3	..	..	56	75
1	1	2	..	..	..	..	..	31	2	..	..	164	333
4	7	3	1	8	..	..	..	75	9	3	1	473	2185

by the medical practitioner in consultation with Tuberculosis Physician.

Number Stationary		Number Worse		Number left off treatment against advice		Number discharged for disobedience		Number of Deaths.				Number still under treatment last day of Year ended 31st Dec., 1921	
								Certified as primarily due to Tuberculosis		Certified as primarily due to causes other than Tuberculosis			
Non- Pulmonary	Pulmonary	Non- Pulmonary	Pulmonary	Non- Pulmonary	Pulmonary	Non- Pulmonary	Pulmonary	Non- Pulmonary	Pulmonary	Non- Pulmonary	Pulmonary	Non- Pulmonary	
..	3	3	
1	2	..	..	..	23	..	3	..	140	18	
..	1	..	..	..	4	5	
..	5	..	..	..	47	10	
1	2	..	..	..	29	..	3	..	194	36	

LIST OF CASES OF TUBERCULOSIS NOTIFIED UNDER THE PUBLIC HEALTH (TUBERCULOSIS)
REGULATIONS, 1912 & 1913, during the year ended December 31st, 1921,
arranged according to Districts.

District and Sub-Districts.	Pulmonary	Other Tubercular Disease	Total	District and Sub-Districts.	Pulmonary	Other Tubercular Disease	Total
URBAN.							
Abercarn				Brought forward ...	188	55	243
Abercarn	4	1	5	Cwmfelinfach ...	2	8	10
Newbridge	5	2	7	Oakdale	1	...	1
Crumlin	2	...	2	Pontllanfraith ...	...	1	1
Pentwynmawr	1	...	1	Nantyglo & Blaina			
Llanhilleth ... ..	...	1	1	Blaina	7	...	7
Abergavenny	10	3	13	Nantyglo	5	...	5
Abersychan				Panteg			
Abersychan	5	...	5	Sebastopol	2	1	3
Pontnewynydd	1	...	1	Griffithstown ...	1	...	1
Talywain	2	2	4	Pontymoile	1	...	1
Abertillery				Panteg	1	...	1
Llanhilleth	8	2	10	Pontypool	...	...	...
Abertillery	9	6	15	Rhymney	...	...	...
Aberbeeg	1	3	4	Risca			
Six Bells	3	...	3	Risca	12	1	13
Crumlin	4	1	5	Crosskeys	4	3	7
Bedwas & Machen				Pontymister ... ..	...	1	1
Maescwmmmer	4	2	6	Tredegar			
Machen	6	...	6	Tredegar	81	18	99
Trethomas	8	1	9	Sirhowy	1	...	1
Bedwas	6	1	7	Troedrhigwair ...	1	...	1
Bedwellty				Usk	2	...	2
New Tredegar	13	2	15				
Argoed	3	2	5	RURAL.			
Blackwood	5	1	6	Abergavenny			
Aberbargoed	8	1	9	Llantilio Pertholey ...	2	...	2
Pengam	4	...	4	Llanvihangel Crucorney	1	...	1
Blaenavon	5	5	10	Llanwenarth Citra ...	1	...	1
Caerleon	...	...	...	Chepstow	...	...	...
Chepstow	...	...	...	Magor	...	...	...
Ebbw Vale				Monmouth	...	...	...
Ebbw Vale	20	4	24	Pontypool			
Cwm	12	2	14	Llanthwy	1	...	1
Victoria	2	...	2	Gwehelog	1	...	1
Waunllwyd	5	1	6	St. Mellons	2	...	2
Beaufort	5	2	7	St. Mellons	3	...	3
Llanfrechfa Upper	8	3	11	Bassaleg	1	...	1
Llantarnam	6	3	9	Rhiwderin	5	...	5
Monmouth	...	...	...	Rogerstone	2	...	2
Mynyddislwyn				Coedkernew	1	1	2
Ynysddu	10	4	14	Malpas	1	...	1
Fleur-de-lis	3	...	3	Rumney ... ..	...	...	...
Carried forward ...	188	55	243	Total	334	89	423

VENEREAL DISEASES.

The Treatment Centre for the County is at the Royal Gwent Hospital, Newport. Dr. P. C. P. Ingram is the Medical Officer in charge of the Centre.

The days and hours of the sessions are:—

Males.—Mondays at 4 p.m.

Wednesdays at 2 p.m.

Thursdays (old cases only) at 4 p.m.

Fridays at 6 p.m.

Females.—Mondays at 2 p.m.

Thursdays at 2 p.m.

Facilities for irrigation of cases of gonorrhœa during the intervals between the clinics are available at the Royal Gwent Hospital, Newport.

The bacteriological examinations in connection with the Centre are conducted at the County Laboratory by Dr. H. W. Catto, the County Pathologist and Bacteriologist, who has been approved for the purpose by the Ministry of Health.

Good results continue to accrue from the work of the Inquiry Officer, Nurse E. M. Walters, amongst women and children suffering from Venereal Disease. This officer visits female patients (old and new) to encourage them to undergo, and persevere with, treatment at the Clinic. She also attends at the Treatment Centre on the days fixed for female patients. The work accomplished by her during the year was as follows:—

No. of visits paid in the Administrative County:—

	1920.	1921.
To new cases which came to her knowledge and which had not undergone treatment	336	361
To old cases in which visits to the Treatment Centre had been discontinued before completion of treatment, also to old cases still under treatment	1157	1138
To members of Voluntary Agencies, District Nurses, etc.	290	280
To suspicious cases (under observation)	114	147
Total	<u>1897</u>	<u>1926</u>

An arrangement has been made whereby a bed is reserved for Monmouthshire women at the Venereal Diseases Hostel at Cheltenham, provided by the Gloucestershire County Council. Two new cases were sent there in 1921, and three cases admitted to the Hostel in 1920, continued to receive treatment in the early part of the year 1921.

Mrs. F. A. Adney and Mr. H. R. Elliott, Lecturers of the National Council for Combating Venereal Diseases were engaged to deliver a series of lectures to women and men respectively in the month of October, 1921. Twenty-one lectures were arranged for women and 21 for men, and the total approximate attendances were 2,490 women, and 2,112 men. The lectures were quite distinct, being held upon different days and generally at different halls.

There is no doubt that the lectures were greatly appreciated and productive of a vast amount of good. The lecturers were asked many questions by the members of their audiences and there was a large demand for the literature dealing with the prevention of disease which was distributed at the meetings. Requests were made for further lectures and it is hoped to arrange for another series to be delivered in the autumn of 1922.

The following is the report of Dr. P. C. P. Ingram upon the result of the year's work at the Treatment Centre:—

“ The improvements in the Clinic, both as regards increased accommodation and an additional session, noted in last year's report have been fully justified during the past year. The total of attendances again shows an increase, and the provision for early diagnosis in syphilis, with its consequent immediate treatment, have been of great benefit, both to the public, by reducing the period during which the patient is a danger to the community, and for the patient personally, by increasing the probability of a permanent cure.

For the first time the number of new cases of syphilis and gonorrhœa shows a decrease. This has been noted in many Clinics throughout the Country, but it is perhaps too early to comment on it in view of the fact that there was a great falling off in attendances, both of old and new cases, during the coalfield stoppage. During that time many potential patients left the district, and on resumption of work some, owing to lack of means, were prevented from coming.

These factors make the improvement in attendances all the more gratifying in showing how many patients persevere with the treatment with a view to getting properly cured.

I am again indebted to the Inquiry Officer who keeps in touch with all the female cases, following them up often with considerable difficulty owing to change of address, and who is thoroughly in their confidence.”

Details of the work carried out at the Laboratory and Treatment Centre during the year 1921, are as follows:—

1.—COUNTY LABORATORY, COUNTY HALL.
RETURN OF SPECIMENS EXAMINED.

	1921.								Previous Year (1920)	
	For detection of Spirochaetes.		For detection of Gonococci.		For Wassermann reaction (Syphilis).		TOTAL.			GRAND TOTAL.
	Males	Fe- males	Males	Fe- males	Males	Fe- males	Males	Fe- males		
From County of Monmouth—										TOTAL.
Treatment Centre ...	176	14	390	139	810	291	1376	444	1820	1843
Practitioners ...	—	1	55	17	155	66	210	84	294	277
From County Borough of Newport—										
Treatment Centre ...	130	12	360	65	511	146	1001	223	1224	1082
Practitioners ...	4	1	42	32	137	60	183	93	276	300
From Other Districts— (All from Treatment Centre)										
Glamorganshire ...	2	—	3	6	7	3	12	9	21	20
Breconsghiro ...	—	—	3	—	4	—	7	—	7	12
Other Counties ...	—	—	—	—	2	—	2	—	2	—
Totals	312	28	853	259	1626	566	2791	853	3644	3534

No. of doses of substitutes for Salvarsan supplied to Medical Practitioners:—

			1921.	1920.
Novarsenobillon	.6	gram. =	107	77
"	.45	" =	42	40
"	.3	" =	36	25
Galyl	.4	" =	10	44
"	.3	" =	18	27
			<u>213</u>	<u>213</u>

The number of practitioners upon the register for the supply of salvarsan substitutes is eleven.

2.—TREATMENT CENTRE.

(ROYAL GWENT HOSPITAL, NEWPORT).

Returns of Dr. P. C. P. INGRAM, Medical Officer of Centre, to the Medical Officer of Health, relating to persons residing in the County of Monmouth.

	1921.			1920.		
	Males.	Females.	Total.	Males.	Females.	Total.
1.—Number of persons dealt with at or in connection with the Out-patient Clinic for the first time and found to be:—						
Suffering from syphilis ...	197	96	293	228	96	324
,, ,, soft chancre ...	14	—	14	3	—	3
,, ,, gonorrhœa ...	136	24	160	191	44	235
Not suffering from venereal disease ...	32	—	32	6	3	9
Total ...	379	120	499	428	143	571
2.—Number of persons discharged from the Out-patient Clinic after completion of treatment for:—						
Syphilis ...	7	3	10	—	—	—
Soft chancre ...	4	—	4	3	—	3
Gonorrhœa ...	32	6	38	52	2	54
Total ...	43	9	52	55	2	57
3.—Number of persons who ceased to attend the Out-patient Clinic without completing treatment, and who were suffering from:—						
Syphilis ...	11	2	13	30	3	33
Soft chancre ...	2	—	2	—	—	—
Gonorrhœa ...	14	5	19	12	4	16
Total ...	27	7	34	42	7	49
4.—Total attendances of all persons at the Out-patient Clinic who were:—						
Suffering from syphilis ...	3141	1493	4634	2829	1354	4183
,, ,, soft chancre ...	62	—	62	45	—	45
,, ,, gonorrhœa ...	1565	214	1779	1662	241	1903
Not found to be suffering from venereal disease ...	63	—	63	35	9	44
Total ...	4831	1707	6538	4571	1604	6175

	1921.			1920.		
	Males.	Females.	Total.	Males.	Females.	Total.
5.—Aggregate number of “ In-patient days ” of treatment given to persons suffering from:—						
Syphilis	281	273	554	227	197	424
Gonorrhœa	147	137	284	48	54	102
Total	428	410	838	275	251	526
6.—Number of persons treated with Salvarsan substitutes	345	160	505	616	233	849
7.—Number of doses of Salvarsan substitutes given:—						
Name of drug—Novarsenobillon						
dose .005		2			1	
dose .01		11			15	
dose .03		13			10	
dose .05		38			41	
dose .1		9			41	
dose .2		87			152	
dose .3		136			27	
dose .4		5			743	
dose .45		582			2	
dose .5		18			1334	
dose .6		1478				
Name of drug—Intravenous Galyl						
dose .4 gm.		—			—	
Name of drug—Intramuscular Galyl						
dose .3 gm.		—			—	
dose .4 „		—			—	
Total		2379			2366	
8.—Examinations of Pathological material:—						
Specimens from persons attending at the Treatment Centre which were sent for examination to an independent Laboratory—						
For detection of spirochaetes		190			173	
“ „ gonococci		529			728	
For Wassermann reaction		1101			1216	
Others		14			—	
Total		1834			2117	

DISINFECTION.

The disinfection of rooms, etc. after cases of infectious disease is systematically carried out in all districts. It is to be regretted that slight delays have arisen in Rural Districts owing to the unavoidable lack of central administration.

The facilities within the County for the disinfection of bedding, clothes, etc. are far from satisfactory, and the provision of a travelling disinfector would supply a long felt need in many of the districts.

SANITARY ADMINISTRATION.

Mr. W. E. Thorn, A.R.S.I., M.S.I.A., the County Sanitary Inspector, whose duty it is to assist the County Medical Officer in his sanitary investigations, dealt with various matters requiring attention, and, where the local Council was concerned, acted jointly with the District Sanitary Inspector.

His duties during the year may be summarised as follows:—

Investigations of—

- Sanitary conditions of Schools.
- Pollution of Rivers and Streams.
- Causation of Outbreaks of Infectious Diseases.
- Tuberculosis in Cattle.
- Water Supplies of the County.

Nuisances arising from—

- Drainage, Sewerage, and Sewage Disposal.
- Refuse Disposal,
- and the keeping of animals.

Inspection of—

- Dairies and Cowsheds.
- Dwellings where insanitary conditions, overcrowding, etc., were reported.
- Home conditions of persons suffering from Tuberculosis.
- Taking of samples of water and milk for bacteriological and chemical examination at the County Laboratory; disinfection of premises, etc., etc.
- See also Appendix.

WATER SUPPLY.

The prolonged drought experienced in the summer of 1921, and the consequent water shortage throughout the country, had its effect upon Monmouthshire. • The shortage was keenly felt in some areas, while in most, curtailment of supply was necessary. A few districts, more fortunate, received an ample supply throughout.

Substantial headway has been made with the Grwyne Fawr scheme of the Abertillery and District Water Board, and record progress is anticipated during the present year. The Reservoir when complete will contain 376,000,000 gallons with a top level of 1,790 feet above Ordnance Datum. Water is at present being conveyed through the new 16 inch steel main to constituent areas, powers having been obtained for utilising the water from the Grwyne Fawr during the construction of the works.

The supply under the Tredegar Urban District Council Act, 1920, from the Shon Sheffrey's spring and reservoir, is not only ample for the needs of the district, but will enable the Council to meet the needs of a considerable portion of the population of the Bedwellty and Mynyddislwyn Councils. It is proposed to filter this supply and the necessary works are so well advanced that their completion is expected in August of 1922.

During the year the water undertakings of the Authorities in the Rhymney Valleys, and the Rhymney and Aber Gas and Water Co., were taken over by the newly constituted Rhymney Valley Water Board. The supplies are received from various local sources, but chiefly from the Taf Fechan Water Board, which has taken over the powers previously possessed by the Merthyr County Borough.

In the Ebbw Vale Urban District a new main was laid during the year, giving Cwm and Waunlwyd a constant supply in place of the previous intermittent one.

In Monmouth Borough the Water Company was unable to maintain a full supply from the Buckholt source, consequently the Wyesham source had to be largely used. An analysis of the latter water showed a certain degree of pollution and the public were warned to boil all water before use. The filter beds were attended to as soon as the supply could be dispensed with.

The Medical Officer of Health of the Nantyglo and Blaina Urban District advises the thorough overhauling of the filters for the Blaencwm water.

In the Llantarnam Urban District the Surveyor reports that a few springs serving portions of the area are not above suspicion. It is hoped that a satisfactory supply will be available in the near future.

An acute shortage was experienced in the Monmouth Rural District, and the Medical Officer is of the opinion that a more adequate supply could be obtained by the provision of a better plant for pumping.

SEWERAGE AND DRAINAGE.

The summer drought again has its effect under this heading. Lack of rain and a general shortage of water making the question of flushing drains and sewers a very difficult one.

Progress is being made in the connecting up of houses to the Western Valleys Main Trunk Sewer and the Sirhowy Valley Sewer. The high cost of labour and materials, coupled with the trade depression resulting from stoppages in the coal-field, have impeded the carrying out of this very necessary work, but each year shows an improvement in the drainage conditions.

The Rhymney Valley Main Trunk Sewer is now nearing completion and in the near future the question of connecting up by the Authorities concerned will arise.

There is no change in the condition of affairs in the Eastern Valleys, the Afon Lwyd still receiving practically all the crude sewage matter. The situation is now more acute than ever, and a proper sewerage system is an urgent need.

In the matter of the closet accommodation in the districts, gradual improvements are taking place, and the conversions to water closets, of privies and earth closets, the dispensing with hand flushed closets and the replacement of old types of pans by the pedestal type, are some of them.

In the Abercarn Urban District the Kendon and Trinant sewers have been completed and notices are about to be served on owners of property to connect up; improvements have also been made in the drainage of Central Road, Llanhilleth.

The Medical Officer of Health for Blaenavon Urban District reports that 150 yards of new drainage has been laid during the year.

In Monmouth Borough a great improvement has been effected in the regularity of the pumping from the sewage collection tanks. Old pumps have been repaired and a new steam pump installed.

Subsidence has caused trouble in the Rhymney Urban District; some sewers and drains required relaying, whilst others had to be continually cleared.

The village of Caldicot in the Chepstow Rural area will shortly benefit by the proposed new sewerage scheme. Completion is expected in 1922.

The defective working of a septic tank at Malpas in the St. Mellons Rural District, causing a serious nuisance, was satisfactorily attended to.

POLLUTION OF RIVERS.

The Rhymney River and the Afon Lwyd continue to serve as open sewers for the valleys through which they flow.

Improvements in the sewerage and drainage in the valleys of the County must necessarily lessen the amount of pollution of rivers and streams. Much yet remains to be done, and the apathy shown by many of the Councils of the districts adjoining, or served by the rivers is greatly to be regretted; more particularly does this apply to the tipping of house and other refuse into the river by the householders, and the existence of the tips of some Councils in close proximity to the river.

In the course of investigations carried out by the County Sanitary Inspector, slaughter-houses, pig-styes and manure heaps have been found to drain directly into the river, also offal and pigs' hair floating about the water's edge. There were also instances of hairdressers' trade refuse having been deposited on the river bank.

There is evidence of considerable pollution by effluent from works, colliery washings and slag tips.

In the Chepstow Rural District the drainage from a farm was found to be polluting the Castroggy Brook, part of which enters the Newport Corporation Reservoir. The farmhouse became unoccupied and action was deferred.

HOUSE REFUSE AND SCAVENGING.

Scavenging is carried out in the industrial areas either by the Council themselves, by Contractors, or partly by both. A few Councils undertake a daily collection of house refuse, but in most cases the work is done every two or three days.

Tipping on land is the means of disposal resorted to in practically all instances. In only two districts have Refuse Destructors been adopted, viz., Abertillery and Pontypool Urban. The need for new tipping sites is a difficulty in several districts, and the provision of refuse destructors is again urged as the solution to an increasingly serious problem.

Motor lorries are replacing horse drawn vehicles in several areas, and in view of the increased speed the desirability of adequately covered vehicles, to prevent refuse being blown about, is obvious.

One or two Rural areas have no system of scavenging, and complaints, particularly from houses adjacent to industrial localities are more numerous and undoubtedly well founded.

This matter requires the early attention of the Councils concerned.

HOUSING.

The following table shows the progress of the schemes of the District Councils in the County, for the erection of new houses, during the year:—

**Position of Housing Schemes of the various
Councils at 31st December, 1921.**

	Total Number of Houses originally proposed to be erected.	Total number completed.	Total number in course of erection.	Remarks.
URBAN.				
Abercarn ...	702	Nil.	71	Two Schemes, one at Llanfach and one at Treowen.
Abergavenny ...	240	Nil.	16	
Abersychan ...	1000	52	122	
Abertillery ...	80	40	Nil.	Sanction received for 65 only. Large site acquired.
Bedwas and Machen	400	52	92	Maesycwmmmer 50, Bedwas 150, Trethomas 130, Machen 70.
Bedwellty ...	1100	102	24	
Blaenavon ...	144	17	49	
Caerleon ...	—	—	—	Scheme held up.
Chepstow ...	—	—	—	No Scheme yet commenced.
Ebbw Vale ...	240	94 houses 45 hut dwellings	42 houses 55 hut dwellings	Each hut accommodates two families.
Llanfrechfa Upper	60	Nil.	Nil.	Contract about to be signed for the erection of 16 houses.
Llantarnam ...	175	Nil.	18	
Monmouth ...	No actual No. fixed	Nil.	Nil.	
Mynyddislwyn ...	128	Nil.	Nil.	Original Scheme 516 houses, not sanctioned. Tenders about to be invited.
Nantyglo and Blaina	186	Nil.	100	At Ffosmaen, Nantyglo. Original Scheme 160 to 200.
Panteg ...	160	65	39	Another 40 sanctioned if justified by Census returns.
Pontypool ...	260	6	124	
Rhydney ...	150	Nil.	50	
Risca ...	750	83	9	
Tredegar ...	500 brick houses 25 wooden bungalows	24 houses 25 bungalows	76 houses	Bungalows at Nantybwh (temporary Scheme), Houses at Ashvale.
Usk ...	6	Nil.	Nil.	Amended Scheme.
RURAL.				
Abergavenny ...	116	Nil.	Nil.	Tenders not approved by Ministry.
Chepstow ...	130	22	Nil.	Ministry refused sanction to proceed at present.
Magor ...	—	—	—	Ministry will not sanction the acceptance of tenders.
Monmouth ...	24	10	—	Contract for remaining 14 withdrawn.
Pontypool ...	20	20	—	Original Scheme 50 to 60.
St. Mellons ...	138	44	94	At Rogerstone.

Building still progresses but slowly, and there is no evidence of an immediate improvement. The falling prices of materials and the somewhat improved labour conditions may serve to awaken private enterprise and thus aid the Councils in their endeavours to lessen the formidable housing problems.

An enormous amount of overcrowding continues to exist throughout the County, which the materialisation of the various housing schemes will only partially remedy.

Minor repairs are enforced, but many houses wholly unfit for human habitation are still occupied through lack of any alternative accommodation; for this reason also, houses needing temporary closure in order that structural repairs might be effected, remain unattended to.

SALE OF FOOD AND DRUGS ACT.

At the meeting of the Works and General Purposes Committee, held on the 13th July. 1920, it was decided that the County Medical Officer should exercise general supervision over the action to be taken in pursuance of the Acts and Regulations under the Sale of Food and Drugs Acts, and that he, the County Analyst, and, if necessary, the Clerk, should confer as to the details of the proceedings necessary to secure observance of the Acts and Regulations.

The Administrative County is divided into three districts for the purposes of these Acts, as follows:—

District A., under the supervision of Inspector T. H. Lewis, assisted by Mr. A. A. Coles, and comprising the municipal boroughs of Abergavenny and Monmouth, the Urban Districts of Abersychan, Blaenavon, Llanfrechfa Upper, Llantarnam, Panteg, Pontypool and Usk, and the Rural Districts of Abergavenny, Monmouth and Pontypool.

District B., under the supervision of Inspector G. G. Probert, assisted by Mr. T. R. Davies, and comprising the Urban Districts of Abercarn (part) Abertillery, Bedwellty, Ebbw Vale, Mynyddislwyn, (part), Nantyglo and Blaina, Rhymney, and Tredegar.

District C., under the supervision of Inspector T. E. Serjent, assisted by Mr. J. R. Gamble, and comprising the Urban Districts of Abercarn (part), Chepstow, Llantarnam, Mynyddislwyn, and Risca; and the Rural Districts of Chepstow, Magor, and St. Mellons.

During the year 1,216 samples were examined by the County Analyst, Mr G. R. Thompson, F.I.C., F.C.S.

The following schedule gives details of the samples taken for analysis and in which Police Court proceedings were instituted, arranged according to the respective districts:—

District in which sample was taken.	Nature of Sample.	Extent of Adulteration, etc. of Sample.	Result of Police Court Proceedings.
Abergavenny Urban	Milk.	56.47% added water	... Fined £20.
	"	5.67% deficient in fat	... Fined £5.
	"	16.70% added water	... Fined £10.
	"	20.47% added water	... Fined £10.
Abertillery Urban	"	23.33% deficient in fat	... Fined £3 and Court Fees.
Blaenavon Urban	"	25.33% deficient in fat	... Fined £5.
	"	10% deficient in fat	... Fined £5.
	"	5% deficient in fat	... Fined £3.
Caerleon Urban ...	"	16% deficient in fat	... Dismissed.
	"	17.33% deficient in fat	... Dismissed.
	"	18.66% deficient in fat	... Dismissed.
Chepstow Urban ...	"	20% deficient in fat	... Dismissed.
Ebbw Vale Urban ...	"	3.33% deficient in fat	... Ordered to pay £5 Costs.
Llanfrechfa Upper Urban ...	"	12% deficient in fat	... Dismissed.
	"	13% deficient in fat	... Dismissed.
	"	8.83% added water	... Fined £25 (third offence).
Monmouth Urban	"	13.33% deficient in fat	... Fined £3 and Costs £4 18s. 6d.
	"	15% foreign fat	... Fined £10.
Mynyddislwyn Urban ...	"	28.35% added water	... Fined £10.
Nantyglo and Blaina Urban ...	"	15.33% deficient in fat	... Dismissed.
Rhymney Urban ...	"	8.24% added water	... Fined £5 and £5 Costs.
Risca Urban ...	"	25% deficient in fat	... Ordered to pay £10 10s. Costs.
Tredeggar Urban ...	"	4.12% added water and 7.55% deficient in fat	... Ordered to pay £5 Costs.

Twenty-three vendors were cautioned during the year on account of samples of the following:—Milk 18, Rice 2, Baking Powder 1, Lard 1, and Camphorated Oil 1.

The report of the County Analyst for the year is as follows:—

“ I have the honour to make the following Annual Report to you upon the work done under the Food and Drugs Act during the year ending December 31st, 1921.

Samples have been submitted for analysis from the undermentioned sources:

From Inspector Lewis, Division “ A ”	...	...	378
„ Inspector Probert, Division “ B ”	...	...	483
„ Inspector Sergeant, Division “ C ”	...	...	351
„ Local Authorities	...	...	3
„ Food Control Department	...	...	1

Total Samples analysed 1216

The Local Authorities who sent in samples were Abersychan two samples, and Abergavenny one sample, and to them in due course results were communicated.

As is usual, for the purposes of my Annual report the various articles are as far as possible grouped and it becomes necessary to summarise the Quarterly reports made by me to you during the year.

MILK.—There have been taken 771 samples, which is practically two-thirds of the whole number: in the year 1920, there were 802 samples of milk taken out of 1,193 samples, so that this year the milk samples are numerically and proportionately rather less than in the previous year, and whilst in 1920, 35 samples proved adulterated, we have this year 40 samples against which I have certified, hence the proportion of adulterated samples is somewhat greater, being 5·20 per cent. against 4·38 per cent. in 1920.

The samples reported against were as under:—

8 with added water, one with added water and being further deficient in fat, and 31 which were below the limits for genuine milk or “deficient in fat.”

The samples containing added water, eight in number, gave respectively 4·71 per cent., 6·82 per cent., 8·24 per cent., 8·83 per cent., 16·70 per cent., 20·47 per cent., 28·35 per cent., and 56·47 per cent., so that at any rate four of these were very serious cases. One sample was found to contain 4·12 per cent. of added water, but was further deficient in fat to the extent of 7·55 per cent., and which was again a serious case.

Those samples deficient in fat were 31 in number and proved as follows:—

4 samples deficient 5 per cent., one each 5·66 per cent., 5·67 per cent., 6 per cent., 6·67 per cent., 7 per cent., 7·33 per cent., 7·66 per cent., 8 per cent.; two samples 9 per cent.; again one each 9·33 per cent., 10 per cent., 11·66 per cent., 12 per cent., 13 per cent., 14 per cent., 14·66 per cent., 15·33 per cent., 16 per cent., 17·33 per cent., 18·33 per cent., 18·66 per cent., 20 per cent., 23·33 per cent., 25 per cent., 25·33 per cent., and 35 per cent.

It will be seen that a great proportion of these was highly unsatisfactory samples and which could not very well be explained as being due to natural causes.

Taking my usual classification, the composition was as follows:—

(a) According to content of fat:

Under 3%	3 to 3·49%	3·5 to 3·99%	4 to 4·49%	4·5% and over.
38	348	255	86	44

(b) According to content of solids not fat:

Under 8·5%	8·5 to 8·69%	8·7 to 8·89%	8·9 to 9·09%	9·1% & over
10	173	260	227	101

It is noteworthy that whilst this year we have had 101 samples which contained 9·1 per cent. and over of solids-not-fat we had only 77 such in 1920, so in this respect the 1921 samples were of better quality, but in respect of fat content of 4·5 per cent. and over, the previous year showed better results when we had 51 with 4·5 per cent. and over. This is largely due to the heavier number of adulterations this year through fat deficiencies.

For the six years ending and including 1921, the average composition is interesting, and until last year showed a gradual reduction in percentage of adulteration:—

Year.	Total Solids.	Solids-not-fat.	Fat.	Adulteration.
1921	12·36%	8·84%	3·52%	5·20%
1920	12·19%	8·61%	3·58%	4·38%
1919	12·46%	8·74%	3·72%	5·07%
1918	12·30%	8·63%	3·67%	7·59%
1917	12·37%	8·71%	3·66%	10·67%
1916	12·52%	8·73%	3·79%	10·30%

I venture to suggest to you that the above figures which represent the analysis of about 4,000 samples taken under a variety of conditions as to time of year, locality, breed and number of cows in the various herds, go to prove that the present limits for Genuine Milk, i.e., “not less than 3 per cent. of fat and not less than 8·5 per cent. of solids-not-fat,” are none too stringent and do not err on the side of harshness as to what the Public are entitled to receive as “Milk.”

I wish to mention that a number of samples have been submitted to me over the year for my opinion as to “cleanliness” and as a rule there has been very little ground for complaint, as the great majority were of excellent character and which would tend to point to care in production of, at any rate the supplies from our own County producers.

Taking the results generally for the year in question, it is regrettable that so many samples were below limits for fat, but on the other hand the number of cases of added water were less than usual, but the tabulated results will serve to show that the average composition was good and would I think, compare favourably with many Counties like our own.

It is satisfactory to note that no sample was found to contain either Preservative or Colouring matter.

Three samples of Condensed Milk were analysed and found to be perfectly genuine and of good quality, but as I mentioned in one of my quarterly reports

there is certainly room for improvement in the law relative to the exact wording of the labels on the tins of certain brands which to put it mildly is "misleading."

One sample only of Cream was analysed and this proved quite normal.

BUTTER.—Fifty samples were analysed and all with the exception of one were genuine: this one sample was interesting for it was sold as "fresh butter" in the open market, and purported to be a farmhouse product, yet unfortunately for the vendor I certified against it in that it contained not less than 15 per cent of foreign fat, i.e., margarine, and on my analysis being challenged as to its accuracy the Government Chemist gave it as his opinion that 17 per cent was nearer the mark.

All the samples were well under the limit for moisture and when any boric acid was found, this also was not found to excess.

One sample only of Margarine was taken and this proved of good sound quality.

LARD.—Thirty-seven samples were analysed and only one was rancid to any notable extent, and in respect of this I certified under the Order covering such. As I have previously mentioned this Order has now been modified for its provisions were really too stringent, and which, if fully observed, would mean taking proceedings against Retailers to their discomfort and in many cases for matters entirely outside their control, but certainly some reasonable limit should be imposed upon the sale of these edible fats, and it remains to be seen whether or not any fresh Order may be issued, which, whilst protecting the consumer will not weigh unduly upon the Retailer.

Three samples of sugar were examined and found fully normal.

PUDDING STUFFS.—Under this heading we had 240 articles, all of which are in considerable demand and taken as a whole proved of most excellent quality. In this class came table jelly 22, jam 4, "Cook's" eggs 1, desiccated cocoanut 1, flour 56, rice 39, tapioca 7, baking powder 34, custard powder 27, egg powder (so-called) 31, blanc mange powder 12, pearl barley 3, and sundry bun and cake mixtures three.

The jelly preparations were quite harmless and of very simple composition with harmless colouring and flavouring substances, and remarkably free from preservatives in general. The jams were all in conformity with the Order so far as it could be interpreted, but this Order has now been withdrawn and we are awaiting a fresh one which will no doubt be useful, if only to protect the Public from raspberry jam with a preponderance of seeds, plum jam with too many stones, etc., etc., but as a whole my experience of jams in general is that they are sound and wholesome even if the exact definition of "fruit" is a little wide in its application.

The flour samples were all above suspicion. The rice as a rule was clean and sound, but two samples carried excess of "facing" to the extent of one and two

TABLE SHOWING THE NUMBER OF SAMPLES TAKEN IN EACH DISTRICT.

[illegible]

per cent. respectively. The baking powders were quite good and efficient except one sample which was perfectly useless as it had lost its aerating powers even if it had ever possessed any, but the stock was removed from sale. The custard powders were pure and wholesome, although some of them bore very misleading statements on the labels, but sufficiently guarded to safeguard the makers. The egg powders, to which I have several times referred, were in some cases so mis-described as to be very little removed from fraudulent declarations, for casual observation would nearly lead one to believe that the contents of the packages were really egg products or composed of eggs, but a loop-hole was always left to place them outside the scope of the Act. Some few brands of so-called egg powder actually did bear false statements in this respect and were the subject of proceedings, but we do not appear to have had any of these in the County of Monmouth. With the exception of the points mentioned above I passed the whole of these samples as satisfactory, good and sound.

Of Beverages there were 35 samples, 5 lemonade, 20 cocoa, 8 coffee, 1 coffee mixture which was sold as a mixture and proved a reasonable article for the price, with one whisky submitted by the Food Control Department, which was excessively watered and was dealt with by that Department. Of spices we had 50 samples including 33 pepper, 10 mustard, 5 ground ginger, 1 malt vinegar and one nutmeg, to none of which exception could be taken.

There were 14 samples of "Drugs:" 3 camphorated oil, 3 cream of tartar, 3 carbonate of soda, 2 seidlitz powders, with one each castor and eucalyptus oils, and carbonate of magnesia.

One sample of camphorated oil was deficient some $5\frac{1}{2}$ per cent. in the most expensive and valuable constituent, i.e., camphor, but the remainder were fully in accord with requirements. The seidlitz powders were strictly correctly compounded which could not be said to be the case with similar articles which came under my notice from another Authority for whom I am also Public Analyst, for out of nine samples submitted by them there was only one which was correct and genuine, so it is clear that our traders have purchased from careful and reputable wholesalers responsible for their preparations.

Under the heading Sundries were nine samples of peas and two of potted meat which proved genuine.

As is necessary to be done, I have examined each and every article received liable to contamination from metals and/or objectionable colouring matters, and have found no instance where adverse comment was required, and in my opinion, the results of the work under the Act during the year have shown a very satisfactory condition of the articles coming under review; they have been clean, sound, good and wholesome, showing care and cleanliness in handling and preparation.

Only one sample of an informal nature was taken during the year and which is included in my General Report.

The total number of samples thus taken being 1,216, of which 47 proved to be adulterated, we have a percentage of adulteration over the year 1921 of 3·87 per cent. against a corresponding figure of 3·30 per cent. for the previous year."

PUBLIC HEALTH (MILK AND CREAM) REGULATIONS, 1912 AND 1917.

Report of the County Analyst for the year ended 31st December, 1921.

(1) Milk and Cream not sold as Preserved Cream.

	(a) Number of samples examined for the presence of a Preservative.	(b) Number in which a Preservative was reported to be present.
Milk	... .. 771	Nil
Cream	... .. Nil	Nil

(2) Cream sold as preserved Cream.

(a) Instances in which samples have been submitted for analysis to ascertain if the statements on the labels as to preservatives were correct.

(i) Correct statements made	... .. 1
(ii) Statements incorrect	... .. Nil
Total	... .. <u>1</u>

(iii) Percentage of Preservative found in each sample.	Percentage stated on Statutory label.
0·18	not exceeding 0·50

(b) Determinations made of Milk Fat in Cream sold as Preserved Cream.

(i) Above 35 per cent.	... .. 1
(ii) Below 35 per cent.	... .. Nil
Total	... .. <u>1</u>

(c) Instances where (apart from analysis) the requirements as to labelling or declaration of preserved Cream in Article V (1) and the proviso in Article V (2) of the Regulations have not been observed.

Nil

(d) Particulars of each case in which the Regulations have not been complied with, and action taken.

Nil

(3) Thickening substances.—Any evidence of their addition to cream or preserved creams:— Nil

Action taken where found ... Nil

(4) Other observations, if any ... Nil

PUBLIC HEALTH LABORATORY.

Facilities are offered to all Medical Practitioners in the Administrative County, free of charge, for bacteriological examinations, and the services of the Pathologist and Bacteriologist are available for any other assistance which may be required in the diagnosis of cases of disease. The following table shows the number of specimens examined during the year. The majority of the sputum tests were conducted for the Welsh National Memorial Association, whilst practically all venereal diseases specimens came through the treatment centre at the Royal Gwent Hospital, Newport.

Table showing nature of specimens submitted for examination and the results thereof:—

Nature of Specimen.	No. Examined.		No. Positive.		No. Negative.	
	1920	1921	1920	1921	1920	1921
Wasserman Test for Syphilis ...	2069	2214	1056	1087	1013	1127
Smears and Urines for Gonococcus ...	1114	1124	310	258	804	866
Serum for Treponema Pallidum ...	324	342	133	140	191	202
Sputa for Tuberculosis, etc.—						
For Tuberculosis Physicians ...	1783	1829	337	368	1446	1461
County Cases ...	88	187	15	46	73	141
Concentration Methods ...	93	200	—	—	—	—
Mixed Infections ...	166	257	—	—	—	—
Throat Swabs for Diphtheria ...	1180	6045	86	330	1094	5715
Widals ...	38	69	13	16	25	53
Hairs for Ringworm ...	36	56	17	22	19	34
Blood Films and Counts ...	298	51	—	—	—	—
Autopsies ...	2	2	—	—	—	—
Tissues for Section ...	23	91	—	—	—	—
Urines for Chemical Examination ...	78	159	—	—	—	—
Pus ...	25	34	—	—	—	—
Effusions ...	2	14	—	—	—	—
Vaccines ...	6	39	—	—	—	—
Waters ...	6	60	—	—	—	—
Foodstuffs (including milks) ...	24	58	—	—	—	—
Miscellaneous ...	67	211	—	—	—	—
Total ...	7422	13042	—	—	—	—

Remarks by the County Pathologist upon the above figures :

It will be noticed that the examination of Blood films and counts have decreased in number, but this was due to the fact that during the year 1920, the laboratory had undertaken the work of the Ministry of Pensions for the South Wales area, owing to their not having a Bacteriologist; during the winter, however, a whole time Officer was appointed to their laboratory at Neath and in consequence there was a considerable falling off in the specimens from that source.

All the other classes of specimens show a distinct increase, especially noticeable in the case of throat, nose and ear swabs, a line of investigation which it was necessary to follow owing to prevalence of Diphtheria throughout the whole of England and Wales, and of which Monmouthshire had its fair share.

In a recent memorandum, the Ministry of Health drew attention to the importance of the application of the Schick test, and the prophylactic minimisation by the Toxin—Anti-toxin mixture, seeming to attach greater value to these measures than to the detection of carriers and their isolation, for the cutting short of an epidemic of Diphtheria. These measures, which are being put into practice on an extensive scale in New York, have not yet commended themselves to any great extent to the profession in this country because of the difficulty of their application.

The Public generally are averse from inoculations of any kind (as witness their attitude towards Small-pox), so that any attempt at this form of prophylaxis will only become possible when the method has undoubtedly proved itself of value and when the people at large have been educated up to it. The Ministry recognise that at present it is likely to be of use in certain cases only, such as fever hospitals where it is necessary to safeguard nurses and other contacts from contracting the disease.

Accordingly we can only fall back on the old measures of throat swabbing and exclusion of carriers, coupled with school disinfection where necessary, and all things considered it would appear that our situation as regards the incidence of Diphtheria compares very favourably with many other parts of the country.

It is true that our exclusions may have comprised carriers of possibly non-virulent bacilli; although many people are of the opinion that a non-virulent strain can never become virulent, basing their contention on experiments in which healthy throats were sprayed with non-virulent organisms without producing the disease, but I do not consider that the case is absolutely proved yet, as there is no indication what the results would have been had the subjects of the experiments been recovering from Scarlet Fever for instance. The incidence of Diphtheria since the Autumn of 1920, has borne a distinct relationship to that of Scarlet Fever and we must admit the possibility that symbiosis of the organisms responsible for the two diseases may be just the factor necessary to convert an avirulent Klebs Loeffler strain into a virulent one.

The specimens from the Venereal Diseases Clinic and other sources are distinctly in excess of those of 1920, but I am of opinion that an even larger number would have come in had it not been for the coalfield stoppage, the depression of trade, and the decrease in the amount of shipping calling at Newport. Owing to these causes many patients failed to attend at the Clinic who would have been doing so in the ordinary course of events.

The Laboratory findings are strongly in support of the necessity of early treatment and its importance on the subsequent course of the disease.

Several cases of re-infection by Syphilis have been recorded during the year showing that the treatment that had been undergone in these early cases was sufficient to rid the patient of his infection. It follows, therefore, that in many instances it is possible to obtain a complete cure on the minimum amount of treatment—an observation which is very valuable from an economic standpoint.

The specimens from the Welsh National Memorial have included, in addition to the ordinary number of routine specimens, sputa taken from patients after they had undergone subcutaneous inoculation with Tuberculin, the object being to bring about a disintegration of any tuberculous focus in the lung and the liberation of bacilli, thus converting a previous negative finding into a positive one, and definitely establishing diagnosis.

I am informed by the Tuberculosis Physicians that this method of procedure has been quite successful in several cases.

Under the miscellaneous group are included a number of experiments carried out on animals, under 39 and 40 Vic. Cap 77. Certificates A3 and B1, licence for which has been granted me by the Home Office Authorities.

These experiments included the diagnosis of Tuberculosis and Anthrax, the testing of Diphtheria bacilli for virulence, the preparation for precipitating sera, the identification of organisms such as the Pneumococcus and others.

Returns of these experiments were made to the Home Office on the 31st December, 1920.

Two scientific papers were read during the year by the Pathologist before the Newport Medical Society on the following subjects:—

- (1) The Laboratory Diagnosis of Syphilis.
- (2) The Differential Diagnosis of Encephalitis Lethargica.

DAIRIES, COWSHEDS AND MILKSHOPS.

The majority of the District Medical Officers have no adverse comment to make upon the milk supplies in their respective areas. The exceptions are:—

ABERTILLERY URBAN DISTRICT.—Supply insufficient and not always fresh. Largely train borne milk.

BEDWELLY URBAN DISTRICT.—Many cowsheds not well adapted for the production of clean milk. Insufficient care exercised in the course of delivery.

RHYMNEY URBAN DISTRICT.—Insufficient supply at certain times of the year. Over one half imported by rail.

See also Appendix.

FOOD INSPECTION, SLAUGHTERHOUSES AND BAKEHOUSES.

In the majority of the districts of the County there is a good system of food inspection. Quantities of foodstuffs were condemned during the year in the Abergavenny, Abersychan, Abertillery, Bedwas and Machen, Bedwellty, Blaenavon, Ebbw Vale, Mynyddislwyn, Panteg, Rhymney, Risca and Tredegar Urban areas. No food-stuffs were condemned in any of the Rural areas. There is no system of food inspection in the Llantarnam, Llanfrechfa Upper or Pontypool Urban Districts.

The slaughterhouses and bakehouses appear to have been periodically inspected in all the districts. Several Medical Officers of Health advocate the provision of public abattoirs.

RAINFALL.

Appended is a table giving the comparative rainfalls between various localities in the County during the year under review, and also for a series of past years.

Name of place at which records were taken.	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921
Abergavenny ...	48'87	33'48	29'92	33'01	35'34	29'42	29'71	50'28	35'94	51'39	45'56	47'03	43'42	37'92	33'35	37'28	31'04	47'87	23'79
Abersychan, Glausychan House ...	—	—	43'81	46'09	55'20	44'90	49'98	66'41	49'92	69'00	63'82	69'95	57'6	—	52'38	56'93	51'84	69'10	38'98
Abertillery ...	—	—	—	51'19	63'4	53'21	60'89	79'65	66'92	84'64	66'71	72'26	56'73	63'24	52'91	58'79	49'1	71'24	40'99
Chepstow, The Cedars	—	—	21'44	31'94	33'61	28'82	35'29	36'46	31'82	49'98	34'80	40'92	35'81	46'07	32'81	36'9	37'54	42'12	23'55
Cwmcarn (Maesderwen)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	47'4	64'15	33'91
Ebbw Vale ...	82'48	55'79	51'63	48'10	58'50	52'20	61'68	76'21	63'26	73'94	66'74	71'65	59'54	63'10	50'02	61'69	48'84	75'21	43'11
Henllys, Pantyreos Reservoir ...	69'68	52'15	39'80	50'31	53'61	45'94	54'84	59'04	52'92	70'68	60'05	62'41	52'62	59'85	46'59	59'74	50'02	63'93	37'57
Little Mill, nr. Pontypool ...	57'04	40'66	30'24	33'67	42'59	36'42	38'35	55'81	42'20	57'66	44'25	46'29	42'88	54'79	39'23	40'06	44'9	46'26	25'94
Newbridge, Troedy-rhiw Fawr ...	72'05	52'50	42'15	46'95	51'26	40'53	45'39	64'06	45'65	64'42	Not taken	Not taken	Not taken	Not taken	Not taken	Not taken	Not taken	Not taken	Not taken
Pontypool, Maesderwen House, Pontymoile	*	51'00	41'30	43'55	52'17	41'53	49'77	64'97	48'25	71'75	Not taken	Not taken	Not taken	Not taken	Not taken	Not taken	Not taken	Not taken	Not taken
Pontypool, Snatchwood Park ...	73'93	52'01	45'40	46'56	57'06	44'62	50'56	65'99	52'29	69'20	64'01	62'07	57'59	61'64	51'33	56'68	51'84	—	37'57
Tredegar, Redesdale House ...	83'08	55'76	50'90	53'37	—	50'14	—	69'64	60'12	74'47	61'09	61'51	51'4	—	41'95	50'44	40'8	51'70	27'49
Wentwood, Newchurch Gathering Ground	59'56	38'42	36'37	38'49	42'82	35'80	40'94	48'35	39'55	56'17	45'43	48'64	42'37	47'38	40'07	47'6	43'26	49'85	29'33
Wentwood, Reservoir	—	—	—	35'42	36'84	31'57	37'31	41'59	34'73	48'96	39'17	42'32	37'55	44'50	37'22	43'67	41'14	46'13	25'71
Llanvaches ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* 13 years to the average year 1904

VITAL STATISTICS FOR THE YEAR 1921.

DISTRICT	ESTIMATED POPULATION.	BIRTHS								DEATHS				INFANTILE MORTALITY.				Zymotic Death-rate per 1000 of estimated population.	Tubercular Death-rate per 1000 of estimated population (including Phthisis and other Tubercular diseases)	Respiratory diseases Death-rate per 1000 of estimated population.	Medical Officer of Health	
		LEGITIMATE		ILLEGITIMATE		TOTAL		GRAND TOTAL	Rate per 1000 of population	Male	Female	Total	Rate per 1000 of population	TOTAL DEATHS UNDER ONE YEAR								
		Male	Female	Male	Female	Male	Female							Legitimate.	Illegitimate	Total.	Rate per 1000 births.					
URBAN.																						
Abercarn ...	20480	303	276	15	11	318	287	605	29.5	132	102	234	11.4	54	4	58	95.9	.83	.49	2.64	E. M. Griffith, M.D., C.M., Abercarn	
Abergavenny ...	9050	106	100	2	10	108	110	218	24.1	82	59	141	15.6	18	3	21	96.3	.66	1.88	1.44	W. D. Steel, M.D., D.P.H., Abergavenny	
Abersychan ...	27620	380	373	13	13	393	386	779	28.2	182	140	322	11.7	73	6	79	100.1	1.05	.76	2.21	R. J. S. Verity, L.S.A., L.M.S.S.A., Garndiffaith	
Abertillery ...	39660	635	569	19	19	654	588	1242	31.3	219	182	401	10.1	121	6	127	101.4	1.46	.63	1.41	T. Baillie Smith, M.B., Ch.B., D.P.H., Abertillery	
Bedwas and Machen ...	8620	120	107	7	2	127	109	236	27.4	58	48	106	12.3	15	1	16	67.7	0.7	1.62	2.44	B. O. Barnard, M.B., C.M., Machen	
Bedwelty ...	31700	573	524	18	19	591	543	1134	35.8	224	172	396	12.4	114	9	123	108.5	2.05	.91	2.02	D. Rees Roberts, M.B., New Tredegar	
Blaenavon ...	12680	154	167	2	3	156	170	326	25.8	81	75	156	12.3	31	2	33	101.0	.71	.39	3.08	G. H. Martin, M.B., B.Ch., B.A.O., Blaenavon	
Caerleon ...	2307	20	10	1	...	21	10	31	13.5	14	8	22	9.5	2	...	2	64.5	.43	.43	1.3	E. A. I. Phillips, M.R.C.S., L.R.C.P., Caerleon	
Chepstow ...	5190	63	76	6	1	69	77	146	28.1	27	27	54	10.4	9	...	9	61.7	.58	.77	2.12	T. L. Drapes, M.R.C.S., L.R.C.P., B.A., Chepstow	
Ebbw Vale ...	36150	532	536	16	19	548	555	1103	30.5	232	166	398	11.0	85	2	87	78.8	.75	.97	1.96	F. M. Fonseca, F.R.C.S., D.P.H., Ebbw Vale	
Llanfrechfa Upper ...	4778	70	55	2	...	72	55	127	26.6	28	20	48	10.0	6	...	6	47.2	1.26	.21	1.05	W. E. C. Murphy, M.B., B.Ch., Cwmbran	
Llantarnam ...	7540	115	89	3	...	118	89	207	27.4	47	35	82	10.9	19	2	21	101.4	1.46	.13	2.12	Ditto ditto	
Monmouth ...	5170	48	66	4	6	52	72	124	24.0	42	39	81	15.7	18	...	18	145.2	1.16	1.16	1.93	W. H. Williams, M.R.C.S., L.R.C.P., B.A., Monmouth	
Mynyddislwyn ...	15160	282	222	3	4	285	226	511	33.6	94	74	168	10.4	43	...	43	84.1	.86	1.39	2.18	R. E. Roberts, M.B., Cwmfelinfach	
Nantyglo and Blaina ...	16860	257	216	11	6	268	222	490	29.1	103	69	172	10.2	37	6	43	87.8	.47	.59	2.31	T. W. Bevan, M.R.C.S., L.R.C.P., Nantyglo	
Panteg ...	11200	139	124	1	7	140	131	271	24.2	68	57	125	11.1	23	3	26	95.9	.45	1.34	1.66	T. J. McAllen, M.B., B.Ch., Pontypool	
Pontypool ...	6990	102	101	3	2	105	103	208	30.0	63	35	98	14.0	22	1	23	110.6	.72	1	3.58	Do. do.	
Rhymney ...	11940	182	163	10	5	192	168	360	30.1	67	62	129	10.7	34	2	36	100	1.59	1.09	1.68	R. V. de A. Redwood, F.R.C.S., L.R.C.P., Rhymney	
Risca ...	17060	220	216	5	3	225	219	444	26.0	91	80	171	10.0	35	2	37	83.3	.64	1.29	1.93	N. N. Wade, M.B., Ch.B., Risca	
Tredegar ...	25650	391	361	11	10	402	371	773	30.1	169	141	310	12.1	74	3	77	99.6	.9	1.13	2.26	E. T. H. Davies, M.D., M.S., F.R.C.S., Tredegar	
Usk ...	1483	11	14	2	...	13	14	27	18.2	8	14	22	14.7	1	...	1	37	.67	1.35	2.02	E. L. M. Hackett, L.R.C.P., L.R.C.S., Usk	
RURAL.																						
Abergavenny ..	9220	97	83	3	2	100	85	185	20.1	53	44	97	10.5	2	2	4	21.6	.22	1.19	.54	E. Y. Steele, L.R.C.P., Abergavenny	
Chepstow ...	8680	83	83	1	4	84	87	171	19.7	41	41	82	9.4	10	2	12	70.2	.35	.69	1.73	T. L. Drapes, M.R.C.S., L.R.C.P., B.A., Chepstow	
Magor ...	5460	48	68	...	3	48	71	119	21.8	31	32	63	11.5	8	1	9	75.6	.18	.55	2.43	E. A. I. Phillips, M.R.C.S., L.R.C.P., Caerleon	
Monmouth ...	6500	83	66	2	7	85	73	158	24.3	32	31	63	9.7	7	1	8	50.6	.46	.77	1.23	W. H. Williams, M.R.C.S., L.R.C.P., B.A., Monmouth	
Pontypool ...	5270	64	47	2	3	66	50	116	22.0	29	28	57	10.8	5	1	6	51.7	.38	.7	.95	E. L. M. Hackett, L.R.C.P., L.R.C.S., Usk	
St. Mellons ...	11540	102	91	5	3	107	94	201	17.4	61	48	109	9.5	17	2	19	94.5	.26	1.04	1.21	N. N. Wade, M.B., Ch.B., Risca	
Grand Totals, 1921 ...	363958	5180	4803	167	162	5347	4965	10312	28.3	2278	1829	4107	11.3	883	61	944	91.5	94	9	1.98		
Totals for Year 1920 ...	369370	5353	5062	170	194	5523	5256	10779	29.2	2328	2051	4379	11.85	897	50	947	87.9	1.15	.87	2.24		

APPENDIX.

MEASURES IN OPERATION IN THE COUNTY FOR THE SAFEGUARDING OF A PURE AND WHOLESOME MILK SUPPLY.

Cows' milk, taking second place only to breast milk as food for the infant, calls for the strictest supervision from its production to the time of its consumption, not excluding the source of production, the cow. Although the great importance of a pure supply of milk for all classes of the community claims more attention daily, much yet remains to be done, particularly in the matter of new legislation, before anything approaching an ideal standard of wholesome supply can be attained.

The purity of a District's milk supply depends largely upon the attention given to it by the Health Officers of that district, the Sanitary Inspector in particular, but unfortunately the numerous and varied duties of that official do not allow of his devoting to this subject the amount of time that might be desired.

The production of milk can be divided up into five stages, viz. :—

1. The construction and condition of the cowsheds.
2. The health and cleanliness of the cows.
3. The cleanliness of the milkers, milk-store and utensils.
4. The use of the strainer.
5. The liability to contamination in course of delivery.

CONDITIONS UNDER THESE HEADINGS AS APPLYING TO THIS COUNTY.

1. The construction and condition of the Cowsheds.

Cowsheds generally are of old type and comparatively few are really good cowsheds; a certain number can be classed as fair, but the majority are bad both in construction and design. The District Sanitary Inspectors are supposed to pay periodical visits and to enforce the provisions as to lime-washing. They also advise as to improvements, but with the exception of minor alterations little is done, and these in most cases merely constitute a "patching up" of something structurally bad. The chief faults are inadequate lighting and ventilation, and defective paving and drainage. It is difficult to persuade some farmers that cows require lighting and ventilation quite as much as do humanbeings. The practice of storing timber, etc. on the rafters above the heads of the cows, with its serious diminution of valuable headroom, is frequently to be seen. The greatest impediment to ventilation one has to contend with, in many instances, is the groundless fear that a draught is

the inevitable consequence. In the matter of cleanliness, accumulations of manure in or about cowsheds are too often to be found. More stringent measures will be necessary before the cowsheds in the county can be regarded as satisfactory.

2. The health and cleanliness of the Cows.

The health of cows in a County such as Monmouth is only affected by the kind of cowshed in which they are kept when weather conditions are the cause for any protracted period of confinement. It is on the reasoning that cows generally live for the greater part of their lives in the open air that the sanitary conditions of the cowshed are apt to be neglected. It cannot be strongly emphasized that two or three days in an insanitary cowshed can set up trouble that months in the open air will not eradicate. There is considerable laxity in the matter of grooming cows, and the prevailing idea that it is a useless and unnecessary proceeding is greatly to be deplored. The hindquarters at least should be rubbed down before each milking.

3. The cleanliness of the Milkers, Milk-store, and Utensils.

The methods of milkers need careful watching by the farmer who aims at the purity of his milk. In the course of investigations it is noticed that the wiping of teats is but seldom carried out, that the milker's hands are often far from clean and that wet milking is more indulged in than dry. Overalls are a rarity and the practice of resting the head against the cow's flank, thus allowing contamination from loose hairs, is often to be observed; this is aggravated in a case where grooming (as mentioned under heading 2) is not done. Milk stores are generally clean, but many are unsuitable for the purpose. Churns are rarely steamed, though little can be said against boiling water being used. Cases have occurred where cold water is used, and that from a questionable source. Washing facilities in the main are unsatisfactory.

4. The use of the Strainer.

In practically every instance a strainer of some type or the other is used, thus keeping the grosser particles of dirt from contaminating the milk.

5. The liability of contamination in the course of delivery.

The contamination of milk in the course of delivery is perhaps the greatest of all in Monmouthshire where so much train borne milk is sold, and where in the colliery districts the taking up of a milk round is an alternative for many who would be otherwise unemployed. The most obvious conditions contributing to contamination are unlocked milk churns travelling by rail, dirty milk carts and utensils, and the unnecessary exposure of milk during delivery. Power to make the locking of churns carried by rail compulsory is urgently wanted.

Control of the conditions mentioned in the above headings is to some extent given to Local Sanitary Authorities by existing Acts and Regulations, where made under the Dairies, Cowsheds and Milkshops Order, 1885, but despite these there

are all important items that are not provided against. The most vital omission is the lack of adequate power to deal with Tuberculosis in the cow and the consequent infection of the milk. The Tuberculosis Order, 1909, of the Board of Agriculture and Fisheries dealt with this disease, but it was suspended during the War and unfortunately, has not again been applied. Whether the Dairies Bill now being discussed in Parliament will consider all deficiencies in this respect is questionable, but it is to be hoped that at least the most important will be given legal remedy.

Another of the troubles caused by the Law as it now stands is that samples of milk taken, other than for suspected adulteration under the Sale of Food and Drugs Acts, 1875-99, must be in the nature of "informal" samples, and no proceedings can be instituted unless a further sample in accordance with the provisions of the Sale of Food and Drugs Acts is procured. Where an "informal" sample is taken for a Local Sanitary Authority, the expense of analysis has to be borne, and this does not tend to encourage the frequent collection of such samples.

A scheme of the County Medical Officer's for the taking of "informal" samples of every milk sold in the County was inaugurated at the end of the year 1921, and is now in operation. Under this scheme one Sanitary area is taken at a time and samples are taken from every milk producer and milk seller in that district. A commencement was made with the Bedwellty Urban District. The samples are collected by the County Sanitary Inspector accompanied by the District Sanitary Inspector, and are examined at the County Laboratory by the County Bacteriologist. In addition to the bacteriological examination for evidence of tubercle, zymotic diseases and dirt contamination, animal inoculations are made for the purpose of definitely ensuring against any possible infection by Tuberculosis. Should this be found to be present, the farm producing the milk is visited and the herd submitted to veterinary examination, individual samples being taken from any cow regarded as suspicious. The milk from suspected cows is ordered to be excluded from that of the herd until the bacteriological examination has been made. In the event of an individual sample proving tuberculous, the owner is persuaded to have the animal slaughtered, in which case it is arranged that a Veterinary Inspector is present at the slaughtering so that any portion of the carcase, or the whole if necessary, can be condemned as unfit for human food. In no case up to the present has there been any difficulty with the farmers on this matter, and in instances that have occurred, they have been only too willing to consent to measures which after all are a protection in the first place to their herds, and in the second to their business as milk sellers. The tuberculin test is employed in cases where bacteriological examination of the sample has proved it to be suspicious, but has not shown definite evidence of Tuberculosis, also a close watch is kept upon the cow before its milk is again allowed to be mixed with that of the herd.

In cases where the bacteriological examination of an "informal" sample yields evidence pointing to want of care in handling the milk after it has left the

cow, or to its contamination in other ways, the Clerk to the Local Sanitary Authority is advised to send a warning letter to the milk seller.

The moral effect of the whole scheme is evident, not only in the district in which samples are taken, but among the milk sellers in surrounding districts. News of such happenings travels rapidly and far in the milk world.

During the carrying out of the scheme it has become more and more evident that the existing requirements as to the Registration of milk sellers are far from satisfactory. Names continue on the Register of persons who have ceased to sell milk for years, and on the other hand, many vendors have been discovered distributing milk without having been registered at all, some owing to the business having changed hands, others through ignorance of the necessity for registering. The idea that registration in one area entitles one to sell milk anywhere is often met with. The Sanitary Authorities are in some cases partly to blame in this matter, in that notices in the press, (or handbills) as to the necessity for registration are not published "from time to time" as stated in the Dairies, Cowsheds and Milkshops Order. In any case the existing method would be much simplified if milk sellers could be required to send in at the beginning of each year a notification to the effect that they intend carrying on this particular business during the ensuing year.